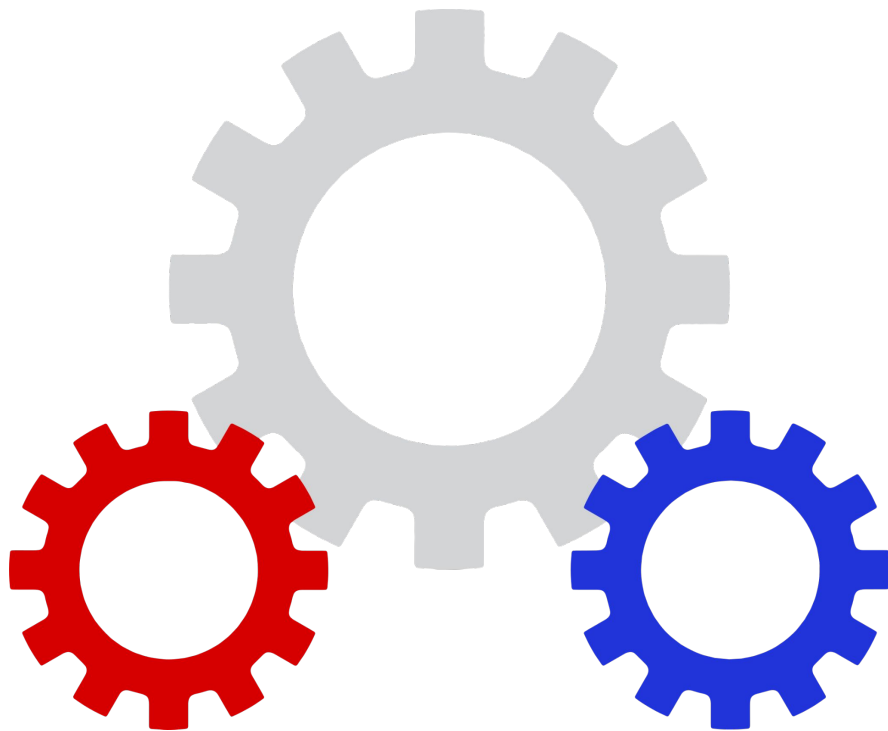


# The WorBots 4145

2024 Branding Standards



**Cultivating a Culture of STEM in Worthington, Ohio**

*ENGAGE, INSPIRE, IMPACT*



## **Preface**

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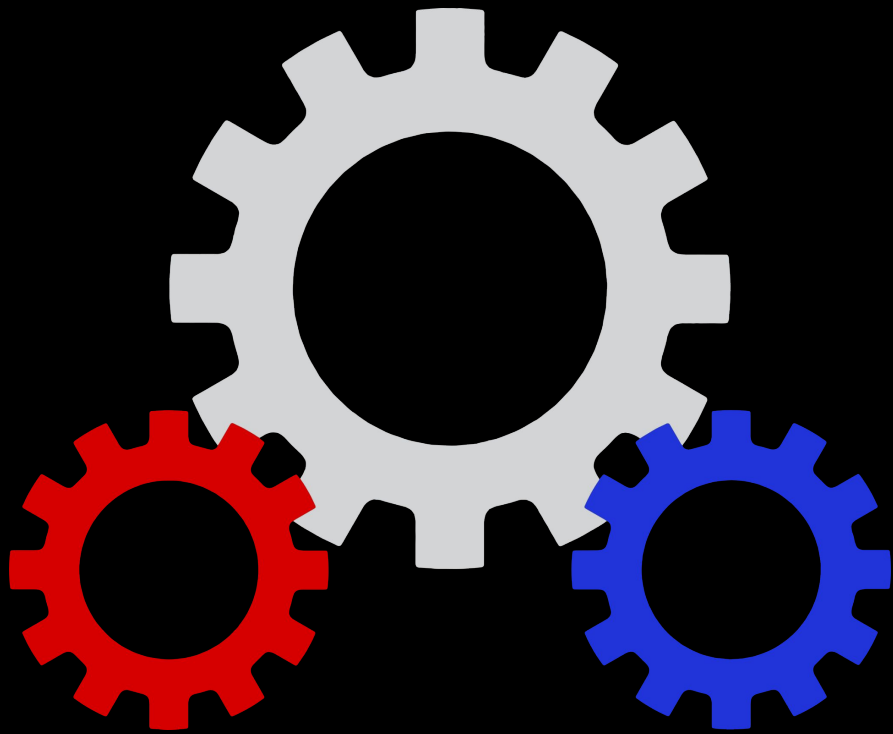
Team branding standards for the WorBots are implemented to ensure all images of the team are consistent and reflect our values. Team members are responsible for upholding and representing the team, which cohesive branding empowers them to do at a higher level.



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**Phrasing**



## **Team Name**

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**Team Number:** 4145

**Official Team Name:** The Worthington Robotics Program

**Team Nickname:** WorBots

### **Acceptable Variations**

The WorBots may be referred to as “WorBots 4145,” “4145,” “FRC 4145,” “Team 4145,” “The WorBots,” or “The Worthington Robotics Team.” The first four variants are derived from the team nickname whereas the final variant is derived from the official team name. Context by which any variants are used must be contextually appropriate as defined below.

At no point should the team be referred to as “The Worthington Robotics Club,” “WarBots,” “Worbots,” “Team WorBots,” or any other variation not stated above. The WorBots are an expansive program of robotics within Worthington and all methods of referencing the team must reflect that.

### **Usage**

In all *FIRST*-centric communication, “WorBots 4145” and associated variants are to be used, as that mirrors our team registration. Within all formal communication with the Worthington School District, sponsors, and community members, the team must be referred to as “The Worthington Robotics Program” or associated variants.

### **Modification**

Any modification to ways by which the team is referred to must be approved by team leadership. For use of documents predating the implementation of these branding standards, they should not be altered to obey current standards when referenced as a product of former seasons (such as awards documentation). If they are being reused in practice, naming may be modified to comply with current branding practices.



## Team Mission and Slogan

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### Team Mission

Our mission is to cultivate a culture of STEM in Worthington, Ohio through:

- ⚙️ **Engaging** the community through our STEM and non-STEM outreach
- ⚙️ **Inspiring** future generations of lifelong STEM learners through our constantly improving cohesive K-12 pathway while increasing retention and diversity in STEM fields
- ⚙️ **Impacting** our community through giveback activities and contributing to the workforce with our growing internship programs

While the aforementioned mission is our formalized team mission, there are times at which that mission may not fit within text. In those cases, the only appropriate variation is that our mission is “to cultivate a culture of STEM in Worthington, Ohio.” In an active voice, this may also be that we are “cultivating a culture of STEM in Worthington, Ohio.” The phrase “through engaging, inspiring, and impacting” may be added as contextually appropriate; however, “through” must be the connecting word.

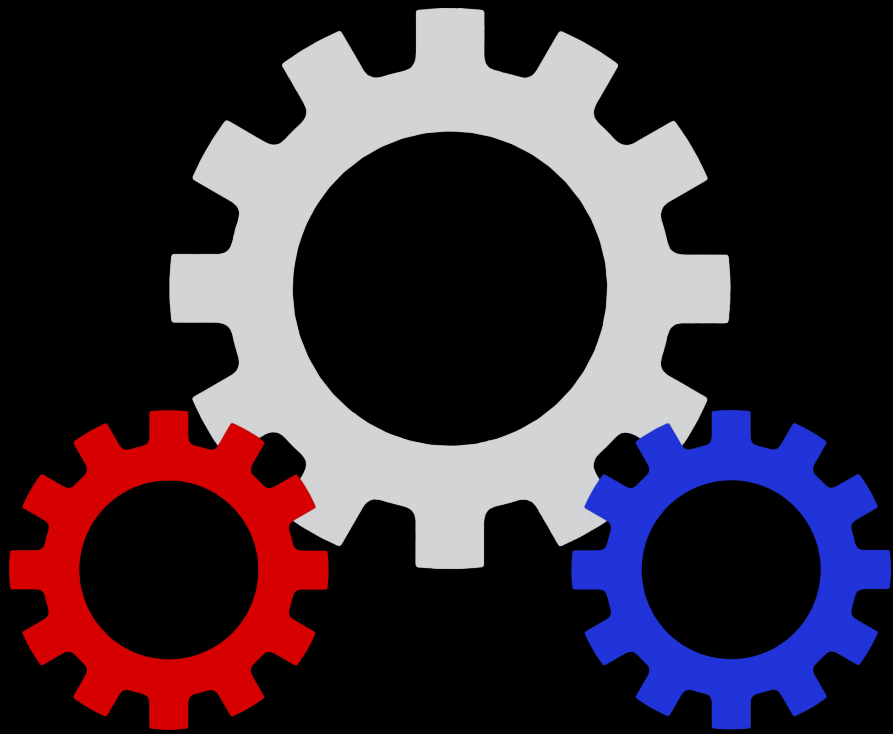
### Team Slogan

The team slogan is “engage, inspire, impact.” The appropriate variations are “ENGAGE, INSPIRE, IMPACT” and “Engage, Inspire, Impact.” At no point should alternative punctuation be used nor should a conjunction be inserted. In the event that they are being used within a sentence and conjunctions are grammatically necessary (ie. “We are engaging, inspiring, and impacting our community”), they may be used. An oxford comma is standard. Capitalization should be consistent. The first letter of each word must have the same capitalization.

Unacceptable variants include:

- ⚙️ Engage, Inspire, and Impact
- ⚙️ Engage; Inspire; Impact
- ⚙️ Engage, inspire, impact
- ⚙️ Engage-Inspire-Impact

All nonstated variations not fitting within the criteria defined in “Team Slogan” should not be used without approval from team leadership.



**Team Logos**

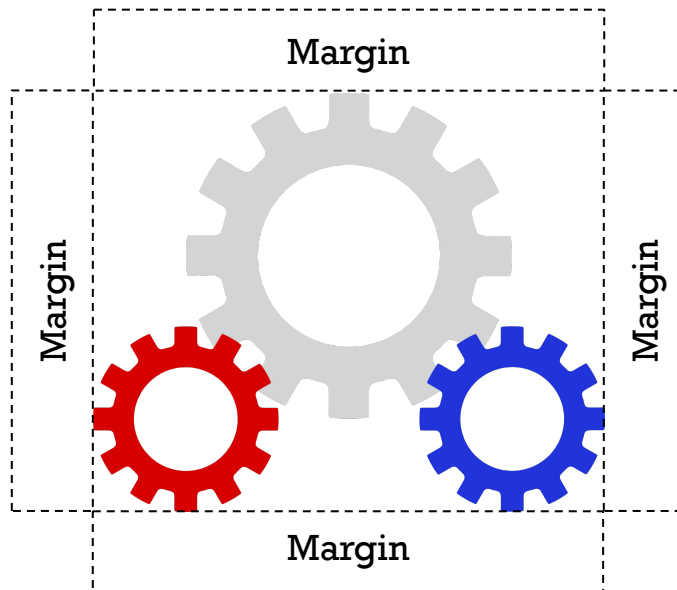
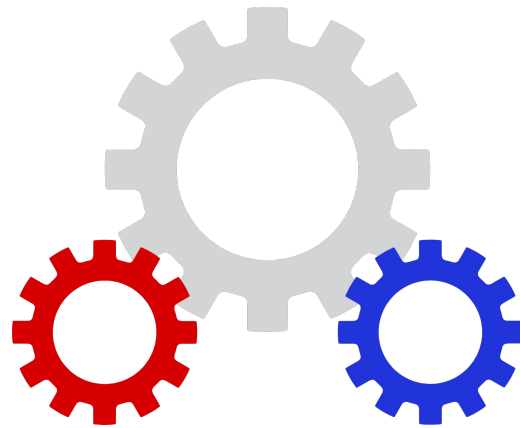


## Gears

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### The Gears

The gears may be used in graphics and when the vertical logo with text and the gears will not fit or in text-based documents using team fonts not including the logo font. All standards below must be followed when using the gears logo.

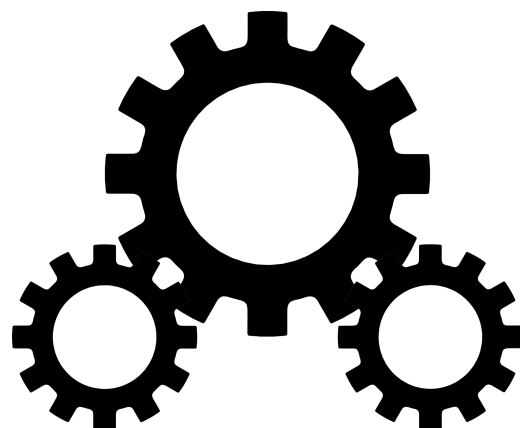


### Spacing

Margins surrounding the gears, at minimum, should be half the height of the red and blue gears below, above, and at each side of the outermost teeth of the gears.

### Coloration

Only when necessary should an all white or all black version of the logo be used. In the event that these versions are used, they should be in contrast to the background. Dark backgrounds should have the white logo and light backgrounds should have the dark logo.



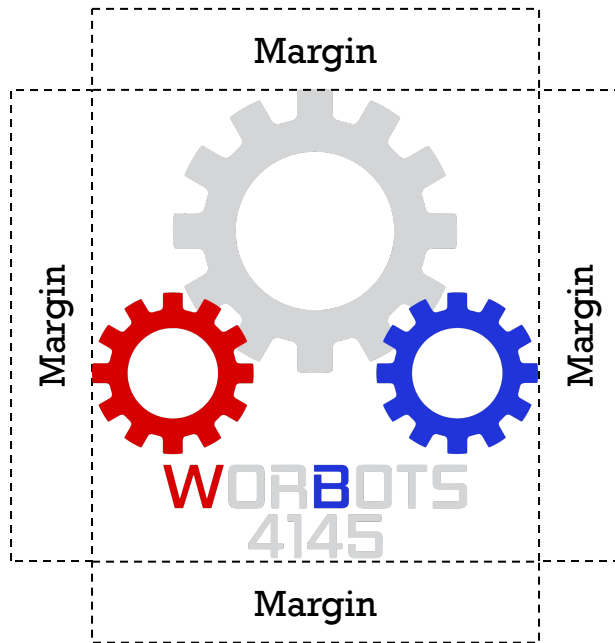
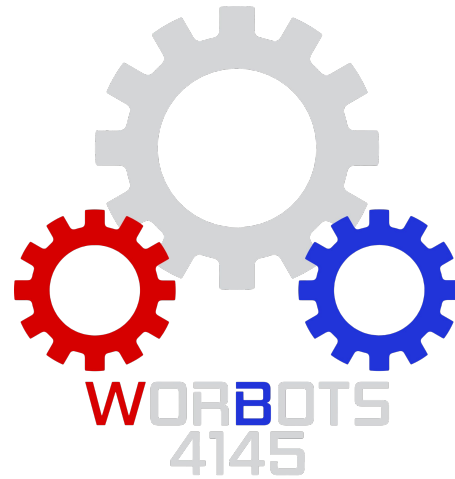




## Vertical Logo With Gears and Text

### The Vertical Logo

This is the primary logo for the WorBots. This logo should be used with respect to all of the standards defined by the team.



### Spacing

Margins surrounding the gears, at minimum, should be half the height of the red and blue gears above and at each side of the outermost teeth of the gears. The lower margin should be of the same size but align with the lowermost part of "4145."

### Coloration

Only when necessary should an all white or all black version of the logo be used. In the event that this versions are used, they should be in contrast to the background. Dark backgrounds should have the white logo and light backgrounds should have the dark logo.



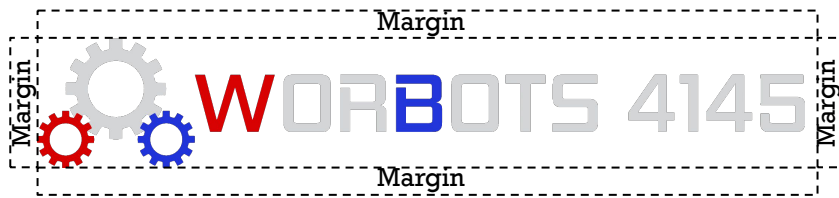


## **Horizontal Logo With Gears and Text**

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### **The Horizontal Logo**

This logo is used when the vertical logo will not fit but the name is still needed. The gears must always be to the left.



### **Spacing**

The spacing should be half of the width of the lower red and blue gears in all directions.

### **Coloration**

Only when necessary should an all white or all black version of the logo be used. In the event that these versions are used, they should be to contrast the background.





## Logo Modifications

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### Proportions

Under no circumstances is the logo to be stretched out of proportion. The center of each of the three gears must be a perfect circle. In the event that the gear logo is too wide or too tall for use in an image, the entire logo must be scaled down. Text on the vertical gear logo with text must also maintain the same text size in relation to the gears. The text should be the height of the grey gear centered around the logo.

### Positioning

The gears must not be:

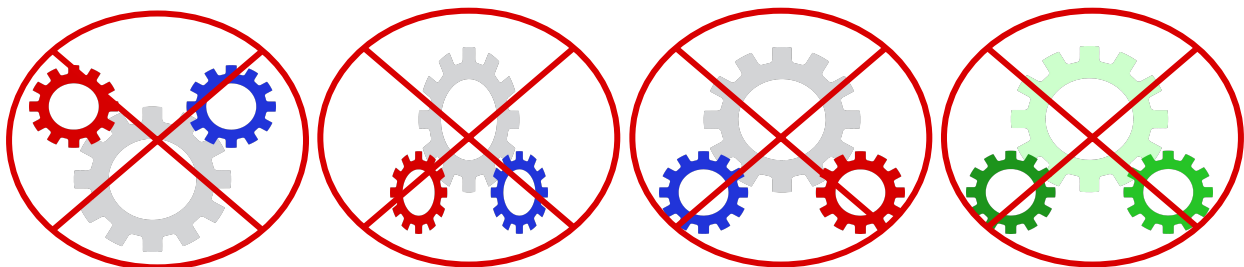
- ⊗ Flipped
- ⊗ Tilted
- ⊗ Aligned
- ⊗ Fully horizontal
- ⊗ Fully vertical

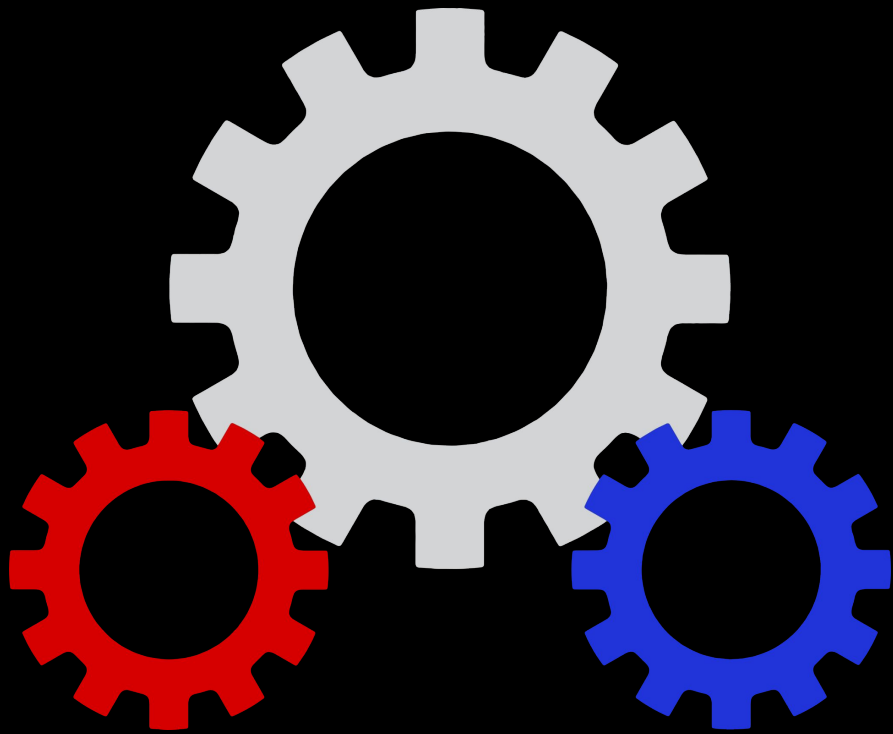
Any desired change in the positioning of the gears must be approved by team leadership. Positioning cannot be changed in the event that the gears do not fit on an image; instead, the gears must be scaled down or an alternate, approved logo must be used.

### Coloration

The coloration of the gears must not be altered. The grey, blue, and red of the gears must always be in the primary grey, blue, and red as defined. The center gear must always be grey. The left gear must always be red. The right gear must always be blue. Unless an all-black or all-white version of the logo is being used, the gears colors cannot be changed.

The accent colors must never be used in place of the proper grey, blue, and red colors in the logo.





**Design Elements**



## Line Structures

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### Line Use

Lines are often used to accent text and add color to text documents and graphics. They may also be used to highlight information or emphasize points. Further, they provide structure within text documents and graphics. The purpose of the use of lines is to build understanding in text as opposed to serving as a distraction. Lines should not be used if not to fulfil this purpose. Within all structure, however, is a need for consistency.



*8.00px lines are used to accent pages on slideshows*



*4.00px lines are used to accent pages on slideshows*



*4.00px dashed lines are used to border information*



*2.00px lines are used to accent pages on documents and slideshows*



*2.00px dashed lines are used to border information*

### Modification

Lines smaller than 2.00px should not be used under any circumstance. Any line larger than defined above may be used; however, that should be stylistic and never for an entire document, graphic, or presentation. Larger lines must maintain line spacing greater than or equal to that of text in all directions and must not leave margins standardly used.

Broken lines of patterns outside of the patterns defined above should not be used without approval from team leadership. Broken lines should not be used in place of solid lines outside of the purpose defined above.



## **Line Formatting**

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### **Line Edges**

Lines may either come to two ends unrounded or a pointed end. Lines ending with a pointed end may not be pointed on both sides. The internal side of the line should be pointed and the external portion of the line should come to a rectangular end.



### **Line Angling**

Lines in graphics only may be slanted; however, the slanting may not exceed a  $\pm 45$ -degree angle. Slanted lines should be used to add dynamics and color to the page; however, they should not be used to structure the text. In the event a slanted line is next to text, the text should be adequately spaced and should not follow a slanted left or right margin. Slanted lines in corners should not be pointed out of the corner under any circumstance. Lines that are slanted must be continuous and are not substitutes for arrows or any other means of labeling or pointing out images or sections of text.

Vertical lines may only be used in graphics and slideshow presentations and may not be directly along a right or left margin. They should not be in direct contact with diagonal lines nor horizontal lines, and slight gaps in continuity between horizontal and vertical lines must be used sparingly.

### **Continuity**

Continuous lines should be used unless providing an outline. In the event that multiple lines of different colors are near one another, they must not be in contact with one another and must retain a distance of, at minimum, one sixteen of the thickness of the smallest line. When multiple lines are near one another, this margin must be maintained or increasing or decreasing by the same factor.





## Shapes

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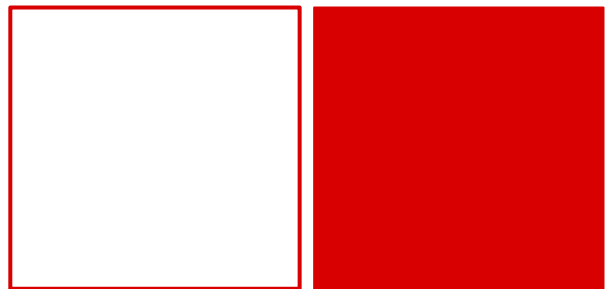
### Shape Usage

In graphics, shapes may be used to focus attention on information, provide structure, or outline information. Shapes should be used for the purpose of clarification above all else, and must adhere to all team branding standards.

All shapes should have sharp, pointed edges. The sole exception to this is the centers of the logo gears, which are to be circles. Rounded edges should not be used as graphic elements under any circumstances.

### Squares

Squares may connect information and provide structure. Traditionally circularly charts such as the SWOT Analysis and pie charts should be done in square form in formalized, published team graphics. All engineering, programming, and robot design documentation using pie charts are exempt.



### Triangles

Triangles are used to accent information, provide firm structure, and demonstrate relationships. Isosceles triangles should be used when triangles are in use. In charts, triangles should be outlines following proper line thickness, and as any other graphic element, triangles should be filled in.

### Rectangles

Rectangles provide, structure, support, and the continuity of information. They should be significantly thicker than 8.00 px line thickness and should never be used in place of lines following proper line formatting rules.





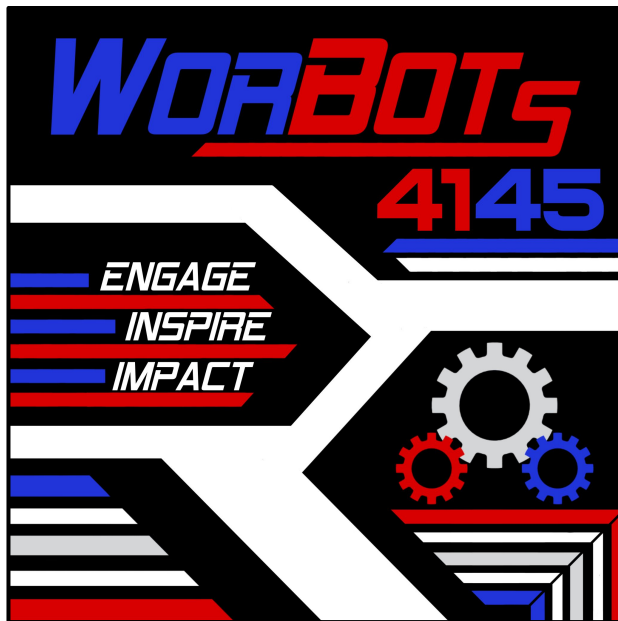
## Shape and Line Discontinuity

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### Discontinuity Usage

Discontinuity is used when graphic elements are providing colored accents to information or breaking up blank spacing. Discontinuity should not, however, be used when shapes or lines are intended to highlight information except in cases of equal discontinuous increments such as dashed lines. Structure can be developed using discontinuous shapes or lines, but the shape or line resembled must be element. Following Gestalt Laws, proximity creates closure, which builds the effect of continuity in addition to mimicking a distinct shape. When discontinuity is present, the foreground and the background must be in significant contrast to one another.

Sections of discontinuity should not obstruct the purpose of the graphic element itself. If an element is intended to break up blank spaces, color added must be significant and the graphic element should be easily identifiable. Discontinuity may be horizontal, vertical, or diagonal but must be linear.



### Discontinuity and Spacing

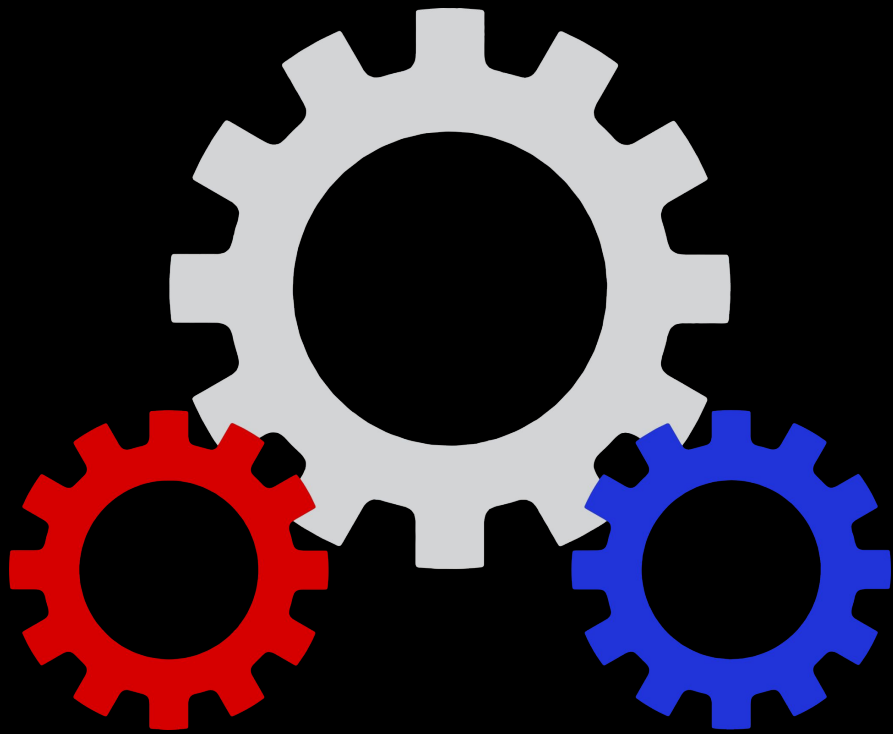
Discontinuity within shapes and lines is not the same as spacing between lines within graphics. On the wall graphic, the left half only exemplifies line spacing. The spacing is not intended to create a shape, and thus is not involved with continuity. In the bottom right corner, continuity is demonstrated; however, this is only represented through the diagonal line through the vertex of the triangle. Lines must adhere to rules laid out for them, while discontinuous shapes follow rules for shapes.

### Dashed Lines

Dashed lines must follow the branding of lines and discontinuous shapes. They should be used to provide structure to vital information within graphics.







**Coloration**



## **Primary Colors**

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### **Red**

HEX: #D80001

RGB: 216, 0, 1

CMYK: 0.00, 1.00, 1.00, 0.15



### **Grey**

HEX: #D4D5D7

RGB: 212, 213, 215

CMYK: 0.01, 0.01, 0.00, 0.16



### **Blue**

HEX: #2134D9

RGB: 33, 52, 217

CMYK: 0.85, 0.76, 0.00, 0.15



### **Black**

HEX: #000000

RGB: 0, 0, 0

CMYK: 0.00, 0.00, 0.00, 1.00

## **Color Usage**

The team primary colors should be used as much as possible above all other colors when creating any team publications. The red, grey, and blue are the colors of the team logo and can be used on all graphics. Black is the background color for graphics, presentations, and team spirit wear.



## Accent Colors

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### **Red**

HEX: #7C0001

RGB: 124, 0, 1

CMYK: 0.00, 1.00, 0.99, 0.51



### **Grey**

HEX: #434343

RGB: 67, 67, 67

CMYK: 0.00, 0.00, 0.00, 0.74



### **Blue**

HEX: #1B245B

RGB: 27, 36, 91

CMYK: 0.70, 0.60, 0.00, 0.64



### **White**

HEX: #FFFFFF

RGB: 255, 255, 255

CMYK: 0.00, 0.00, 0.00, 0.00

## **Color Usage**

The team accent colors should be used sparingly. They provide additional dynamic to graphics and can highlight information as needed, but as less recognizable within the WorBots brand. In graphics, they may be a part of the graphic but may never be the only red, blue, or grey used to represent the WorBots. White may be used as a background for some written documents.



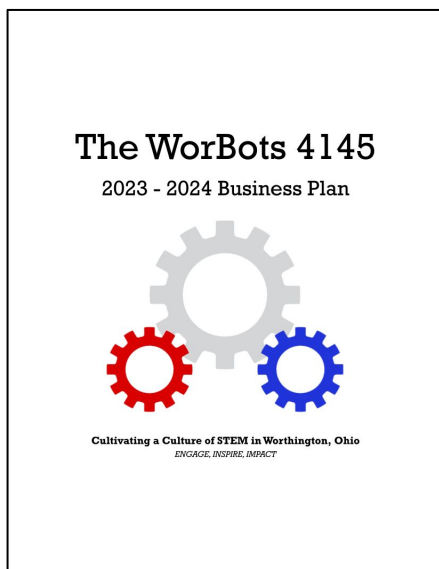
## Color Usage

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### Black Backgrounds

Grey text in the primary grey should be used under all circumstances. No other shade of grey should be used for the text. In the event that there are graphic elements, they should be in the primary red or blue, though there may be red or blue accents.

Black backgrounds should be used wherever possible. They are the standard for team booklets and final projects. Black backgrounds should be printed on black paper—not printed onto white paper.



### White Backgrounds

Black text in the primary black should be used under all circumstances. No other shade of black should be used for the text. Under no circumstance should grey be used for the text—primary or accent. In the event that there are graphic elements, they should be in the primary red or blue, though there may be red or blue accents.

White backgrounds are acceptable in the event that a black background would not work, a document is shorter than five pages, or a document is not final.



## **Background Exceptions**

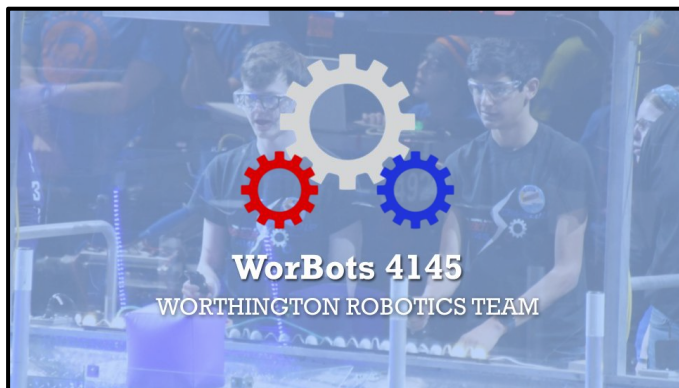
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### **Purpose**

In select cases, the WorBots logo may be used on backgrounds outside of the traditional black or white backgrounds; however, appropriate contrast must be maintained. This, however, should not be confused with a variation of the logo itself; all backgrounds are considered separate from the previously-defined WorBots logo.

### **Background Sign**

In this case, the background of the safety sign is used with the WorBots logo above on select safety bags. This is not an alteration to the WorBots logo itself; rather, it is a background over which the logo lies. When this is in use, the contrast between the yellow and the grey gear must be more significant, as seen on the physical safety bags.



### **Slideshow Presentation**

In this slideshow presentation, the logo is overlaid on an image behind. This is a background—not an alternate logo. There is substantial contrast between each gear and the background, making this an acceptable modified version of the background for the WorBots' gear logo.

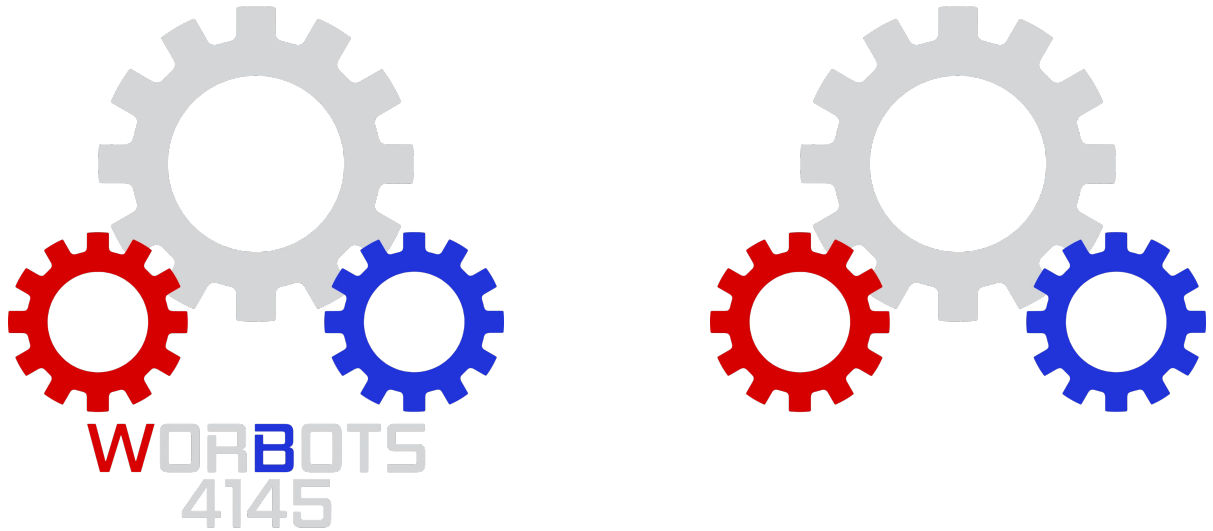


## **Color Placement**

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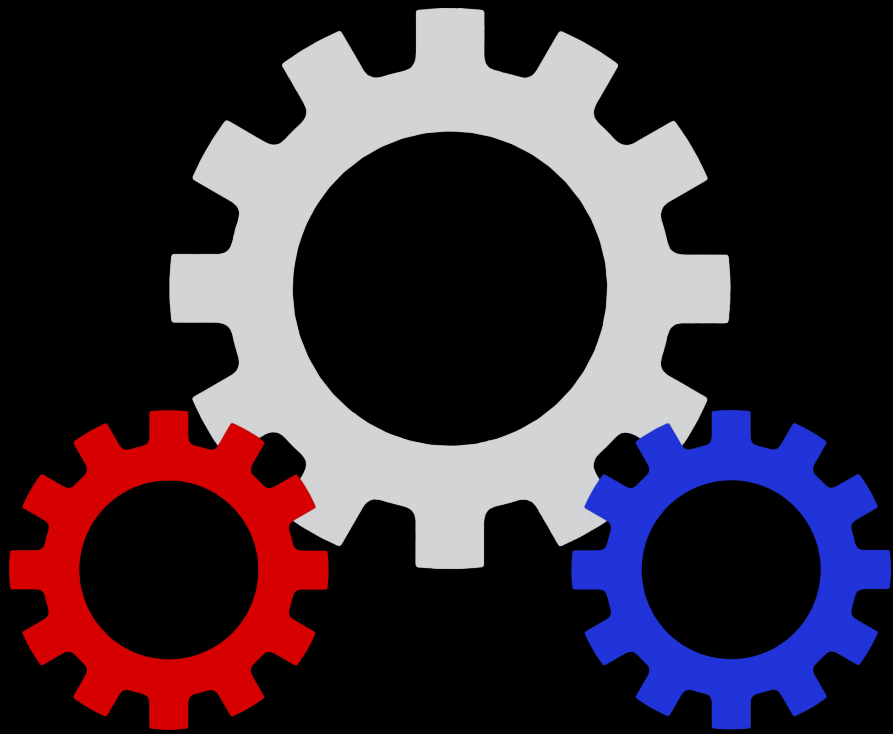
### **Placement Usage**

Specific siding for colors provide consistency within products of the WorBots. As with the gear logo, when only red and blue are in use, red should be to the left whereas blue should be to the right. This is demonstrated on team shirts as well as on each logo model.



### **Exclusions**

The only exception to this positioning rule is when red and blue are used throughout an image or document as opposed to fixed occurrences, in which case they can be used with a randomized distribution as determined fit for visual appeal.



**Typography**



## **Hemi Head**

---

**A B C D E F G H I J K L M N**

**O P Q R S T U V W X Y Z**

**a b c d e f g h i j k l m n**

**o p q r s t u v w x y z**

**0 1 2 3 4 5 6 7 8 9**

### **Usage**

Hemi Head is used for graphics related to the team. This font is found with all of our recent logos as well as on our banners and shirts. It is never to be used italicized. While it may be used as bolded or non-bolded, a non-bolded version of the font is standard and used for the majority of team graphics. Straying from this is expected to be done intentionally. When it is not available, it is substituted by the document font, Rockwell. As with all fonts used by the team, the closed fours are a crucial part of this and may not be substituted by a font that does not use closed fours under any circumstance.





## **Rockwell**

---

**A B C D E F G H I J K L M**

**N O P Q R S T U V W X Y**

**Z**

**a b c d e f g h i j k l m n**

**o p q r s t u v w x y z**

**0 1 2 3 4 5 6 7 8 9**

### **Usage**

Rockwell is the primary document font for the WorBots. This font is used for all written materials such as business plans, letters, technical binders, text on presentations, and informational handouts. It may be bolded, italicized, and underlined as warranted by standard conventions of grammar. When it is not available, it may be substituted by the closest serif font available. As with all fonts used by the team, the closed fours are a crucial part of this and may not be substituted by a font that does not use closed fours under any circumstance.



## Textual Elements

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### Bolding Usage

Bolding in all fully text-based documents should be used sparingly and only to highlight or emphasize information. Headers and subheaders may be bolded following defined sizing guidelines.

In the middle of large sections of text, bolding may only be used to emphasize key concepts. For example in the sentence “our mission is to cultivate a culture of STEM in Worthington, Ohio through engaging, inspiring, and impacting,” the only acceptable variations would be:

- ✿ “our mission is to **cultivate a culture of STEM** in Worthington, Ohio through engaging, inspiring, and impacting”
- ✿ “our mission is to cultivate a culture of STEM in Worthington, Ohio through **engaging, inspiring, and impacting**”

The former would be used in most circumstances; however, if “engaging, inspiring, and impacting” were to be elaborated on or used further within the text, the latter may be appropriate as well.

### Italicization Usage

Italicization is only used in cases when bolding would not be appropriate in sentences and the word being italicized is at the beginning of the sentence and is being either defined or expanded upon. Italicization should not, under any circumstances, be used for emphasis within sections of text. In document headers, the shortened mission may be italicized.

### Underlining Usage

Under no circumstance should underlining be used. Bolding, italicizing, and varying font sizing are the only means of emphasizing sections of text.

### All-Caps Usage

Fully capitalized text may be used in all graphics under any circumstance; however, it should never be used in text-based documents. The WorBots logo fonts should always be fully capitalized.



## **Textual Elements**

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### **Bullet Points**

All bullet points must be gears, and they must be bolded, even when the text is not bolded. Bullet points must retain the line spacing of the text. Spacing between the text should be no greater than half of an inch and no less than one-eighth of an inch. Inner bullet points must be gears but must be unbolded for contrast.

Bullet points must either be the color of the text or the WorBots primary red or blue. Colored bullet points may only be used in graphics—they should never be used in the absence of other occurrences of the primary red or blue in the document. The logo is not an occurrence of team colors warranting the use of colored bullet points.

### **Page Numbers**

Page numbers should always be in the lower right corner of the document. They should be two points smaller than the text of the document. The font for the page numbers should be Rockwell, as with all typed content, and they should be the same color as all other text. At no point should they be highlighted, italicized, or bolded. Preceding zeros should match the number of total pages. For example, in ten-page documents, single-digit pages should appear as “0X.” In one hundred-page documents, single-digit pages should appear as “00X” and double-digit pages should appear as “0XX.”

### **Headers**

On all text documents, pages outside of the title page should include a standard header of the gears-only logo to the left of two lines of text—the first bolded and reading “WorBots 4145” and the second non-bolded and italicized reading “Cultivating a Culture of STEM in Worthington, Ohio.” This is exemplified above. Font size eight is always to be used. For sponsor letters, the header should be the gears to the left of text reading “WorBots 4145” on the first line and “WORTHINGTON ROBOTICS TEAM” on the second. The rightmost corner of the header should also include the address of the team. An example of this header can be found below.



Headers must maintain half-inch distance at minimum from text within any written documents for the team. For graphics, headers must be an enlarged variation of the primary text document header including the title (See Publications).



## **Numbers**

---

### **Number Usage**

In text documents, numbers may be used to convey proportions, measurements, statistics, amount, or other key information. Numbers are means to provide a better understanding of what is being discussed and should be included as such.

### **Numbers in Non-Technical Writing**

Numbers in non-technical writing throughout paragraphs should always be written out unless they are above one thousand and have three or more significant figures. For example, to say that thirty-six percent of a team was on a feeder team, the sentence should be “thirty-six percent of WorBots were on feeder teams prior to joining” as opposed to “36 percent of WorBots...”

In contexts where information is listed such as the “Team Overview” portion of the business plan, sponsor levels in letters, or budgets, numbers should always be in numerical form, as that is the most clear way to present them and this form is the least dramatic shift in flow. At no point should these numbers be written out.

### **Numbers in Technical Writing**

In all technical writing, numbers should be in numerical form as to prevent confusion about information significant to the comprehension of the content itself. This only extends to numbers being used to provide numerically-supported information (ie. “one member of our team” would still be written out).

### **Numbers Formatting**

Numbers should never be Roman Numerals—they should always be in simple numerical format. Numbers above one thousand in numerical form should include a comma unless the specific circumstance would not permit it (ie. information about code).



## Distancing and Line Spacing

---

### Distancing

Between paragraphs of text, there should be at least one blank line in written documents, as indentation is not used. This provides more clarity within documents and allows for further readability. This space should not be extended unless it is beyond subsections, in which case two blank lines of text may be used for separation.

Distancing is intended to clarify as opposed to confuse information. There should never be a blank line inserted for distance as the first line of a page. Separations between subsections across pages should be done through a page break as opposed to addition of blank lines, as this formatting includes the most cross-platform adaptability.

### Line Spacing

Documents should use 1.00 point line spacing to provide consistency. This increases readability while reducing blank space within a document, allowing more content to be included per page. The only exceptions to this line spacing are decreases when the minimum font is reached and a document must fit on one page. An example of this is the “cheat sheet” provided to new parents of students entering the team. Line spacing should only be increased upon absolute necessity.

#### WorBots 4145 Key Information

##### Basic Overview

WorBots: Worthington Robotics Team

Team Number: 4145

Team numbers are semi-chronological; most teams founded around when we were have numbers that are close.

There are 14 active Central Ohio teams and over 3,000 globally

Founding Year: 2012

Program: *FIRST* Robotics Competition (FRC)

*FIRST*: For the Inspiration and Recognition of Science and Technology

*FIRST* is a global program designed to foster industry-standard STEM and soft skills, training the next generation of engineers, computer programmers, technicians, professionals, and problem-solvers.

*FIRST* has three primarily levels: *FIRST* LEGO League (FLL) for elementary school students, *FIRST* Tech Challenge (FTC) for middle school students, and *FIRST* Robotics Competition (FRC) for high school students

*FIRST* in Worthington: FTC Team 16284 The 8-Bit Bandits, FLL Team 44451 WorHawks, FLL Team 44452 HawkBots, FLL 57154 EnerTech

Competition Season: January-April

The competition game is released on the first Saturday of January each year

Most team members attend competition on Fridays and Saturdays, which is when the team is actually competing

Greater Pittsburgh Regional: Wednesday, February 28, 2024 to Saturday, March 2, 2024

Buckeye Regional: Wednesday, March 20, 2024 to Saturday, March 23, 2024

Miami Valley Regional: Wednesday, April 3, 2024 to Saturday, April 6, 2024

World Championship (by invitation only): Wednesday, April 17, 2024 to Saturday, April 20, 2024

Meeting Days: Monday-Thursday (3:30 p.m. start time) and Saturday (9:00 a.m. start time)

Technical Subteams: Programming, fabrication, electrical, pneumatics, robot design, safety

Non-Technical Subteams: Business, marketing, graphic design

Our team is *student led*. While mentors supplement knowledge, help us manage the team, students are in charge of day-to-day activities within the subteams

*Excerpt of reduced line spacing with appropriate fonts.*



## Alignment

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### Alignment Purpose

Alignment is intended to provide clear, structured text that is easily readable and understandable. The purpose of standardizing alignment is to prevent confusion across multiple documents that may coincide.

### Text Documents

For all text documents, justified text is necessary. This ensures that there is balance, allowing for a better aesthetic appeal. Moreover, it provides clean margins, allowing for better implementation of visual balance through images and graphic elements.

At no point should non-justified margins be used within a text document. In the event that an image is present, text should be justified from the margin of the opposite side to the appropriate margin from the photo.

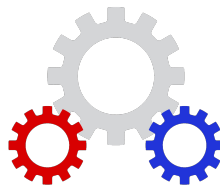
### Graphics

Graphics should use justified margins whenever possible; however, visual balance is the priority, so this is less rigid. In the event that non-justified margins are used, the outermost facing text should still have appropriate margins from all images and graphic elements. When images are smaller than text, the text should be centered with the image. The same is the case for when the image is larger.

### Acceptable



This is an image of the WorBots gears logo. The WorBots gears are a staple of the team.

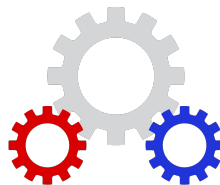


This is an image of the WorBots gears logo. The WorBots gears are a staple of the team.

### Not Acceptable



This is an image of the WorBots gears logo. The WorBots gears are a staple of the team.



This is an image of the WorBots gears logo. The WorBots gears are a staple of the team.



## Text in Written Documents

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### Headers

Headers should always be the largest font size within a document. Typical headers should not exceed sixteen-point font. In standard written documents, headers are fourteen-point font. Headers should be left aligned.

### Subheaders

Subheaders are two font sizes smaller than headers and should be bolded. In typical text documents, they should be the same size as the body text and bolded, though in graphic-heavy documents, the only requirement is the size difference from the header. Subheaders should always be left aligned.

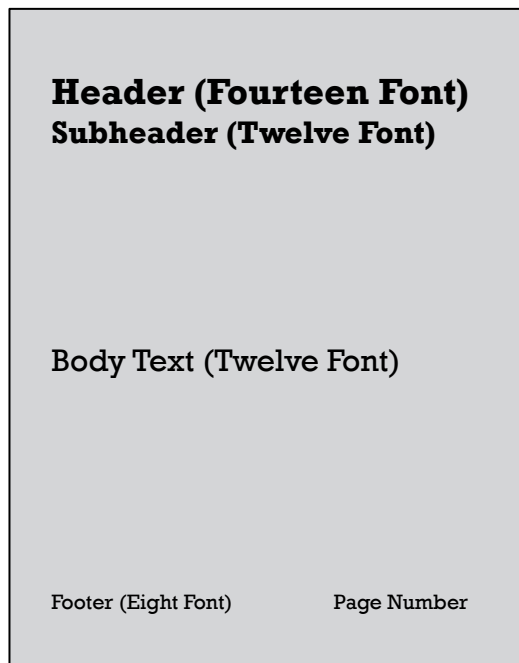
### Body Text (Incl. Indents)

Body text should be twelve-point font in the majority of written documents. Outside of footers, it should be the smallest text within a text document. Body text should never include indents of any kind. Body text should be justified.

### Footers

Footers should be eight-point font in all written document. Page numbers should be right aligned, but all other footers should be left aligned.

### Structure Chart





## Handwritten Documents

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### Handwriting Usage

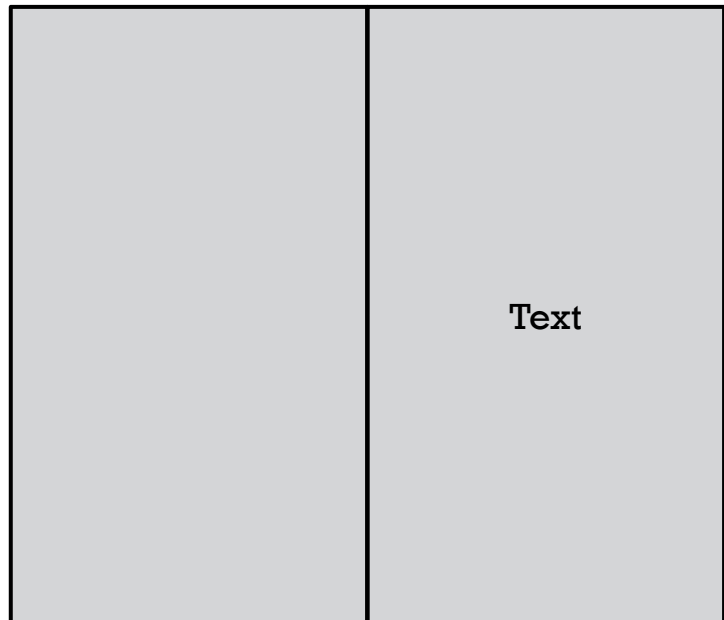
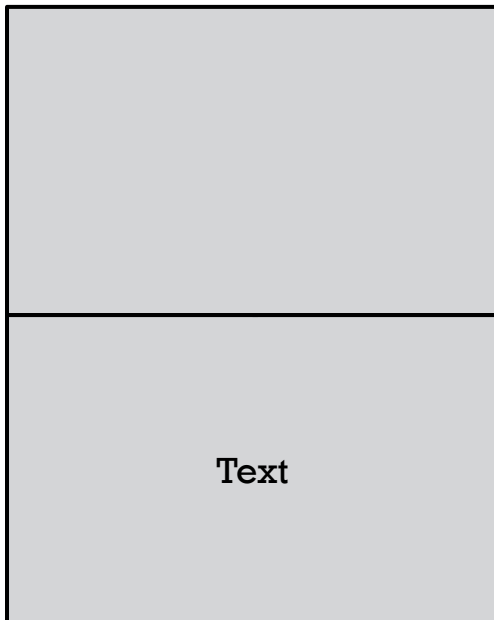
Handwritten letters are used for the WorBots when expressing gratitude to sponsors. Handwriting is more personal and is direct effort each individual time, which is why it is selected for this purpose. Handwriting is also used to sign any documents that may require signing, such as certificates for team members and team awards.

Handwriting is never to be used in place of formal, written documents. While handwriting develops further connection, it does not maintain the professionalism desired in the majority of team products. When handwriting is used, it is to be neat and orderly. It should be straight and ink should be contained to just the words written.

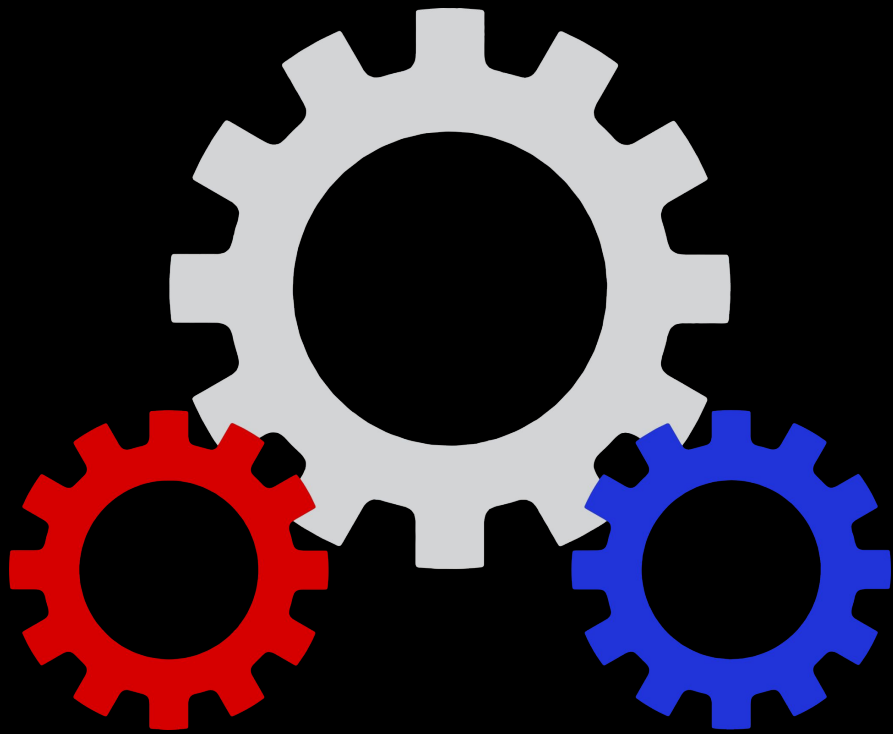
### Color

All written notes should be in black ink, as it is easier to read and mimics the standards of all other team products. The exception to this rule is signatures on printed, typed documents, which should be in blue ink to demonstrate that it is not printed. Certificates should be signed in black ink, however, as some signatures must be printed.

### Location







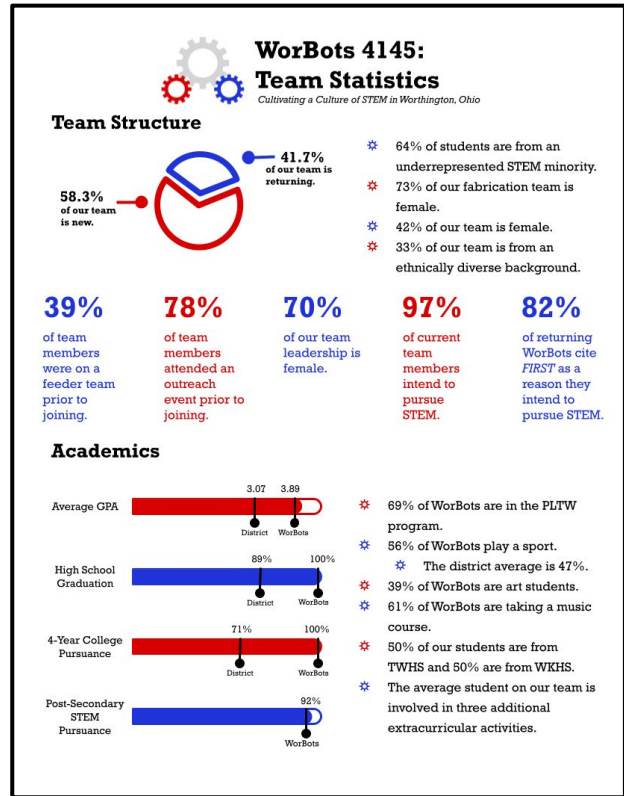
**Publications**



# Team Handouts

## Information Sheets

Team information sheets are made to turn text or numbers-heavy content into understandable and easy-to-read information. Design elements must be selected with this purpose in mind. At the top of the page, the header must include the logo to the left with appropriate margins. Then, “WorBots 4145,” the *FIRST*-registered name should be used. This is followed by the title of the document. Finally, “Cultivating a Culture of STEM in Worthington, Ohio” should be displayed. All colors on information sheets should abide by the defined rules of the primary and accent colors included. Imagery and charts should be used as needed but not in excess. Text font should not exceed ten to fourteen point font for large sections of text.



**The WorBots 4145**  
2022-2023

**Cultivating a Culture of STEM in Worthington, Ohio**  
*ENGAGE, INSPIRE, IMPACT*

**FIRST Program**

*FIRST* stands for “For the Inspiration and Recognition of Science and Technology.” It is an international program connecting students, mentors, and communities with realistic, engaging STEM opportunities.

**FIRST LEGO League Challenge** connects elementary and middle school students with STEM through LEGO robots in teams of up to ten students.

**FIRST Tech Challenge** connects middle and high school students with STEM through 18”x18”x18” robots in teams of up to fifteen students.

**FIRST Robotics Competition** connect high school students with STEM through robots that are over 100 pounds in teams of at least ten students.

At every level of *FIRST*, it is about more than just robots. Students are encouraged to focus on impacting their broader community and use their STEM knowledge to shape the world around them. All teams follow principles such as Gracious Professionalism, fostering connection and growth at every level.

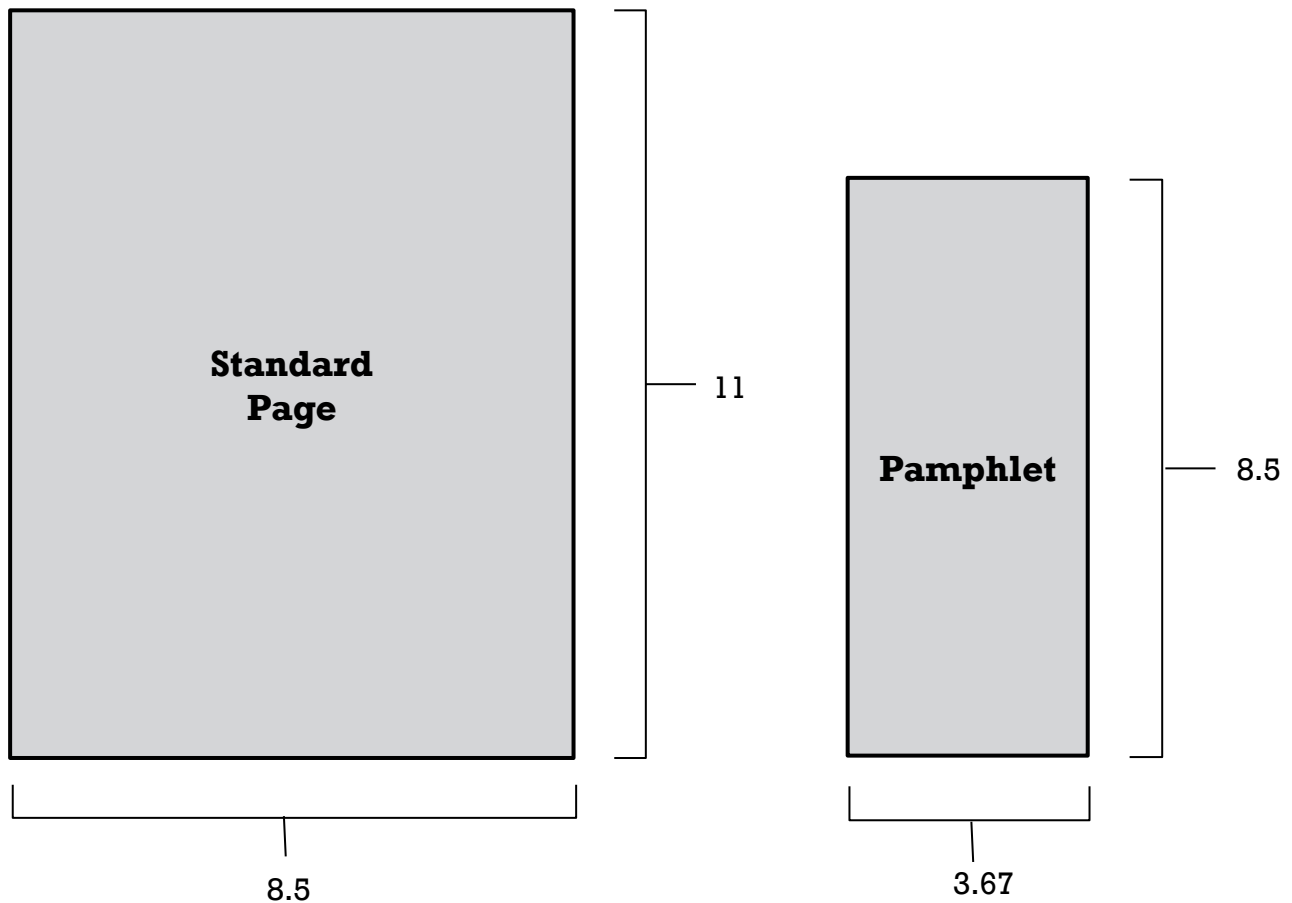
## Pamphlets

Pamphlet formatting should mirror that of all other text and graphic documents produced by and representing the WorBots. The cover page should follow the traditional structure of: Team name, document title, logo, condensed mission statement, and slogan. Within all pamphlets, information regarding the *FIRST* program and feeder programs must be included to provide context as to the purpose and mission of the WorBots.



## Page Sizing

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Standard printer paper should be used for most printed documents. These pages should follow eight and a half by eleven inch sizing and have one inch margins. Only page numbers and headers should extend outside of these margins. No pages with dimensions not listed above should be used in any circumstance. All documents should be produced with this paper sizing in mind.

Pamphlets are a standard piece of paper folded into thirds and containing text on each side. Each panel is three and two-thirds inches wide and eight and a half inches tall. All pamphlets produced by the team should contain half-inch margins and should not stray from the aforementioned proportions.



## Conventions in Written Documents

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### Punctuation

Oxford commas should be used in all written documents. They provide the most significant clarity and reduce confusion, most notably when lists contain long sequences of information. Commas should always be used for lists unless the information itself will not permit such use.

Colons should never be used in headers nor subheaders, as they disrupt visual balance and are not necessary. In the event that a list is directly after a subheader, preceding text may end in a colon or it may be omitted overall.

Dashes in all writing should be em dashes, as they provide the most information separation and the least confusion with hyphens. There should not be spacing between text on either side of the text connected by the em dash. No content inside of two em dashes should be punctuated beyond grammatically-necessitated commas. Parentheses should be replaced by em dashes whenever grammatically acceptable.

### Acronym Usage

Acronyms and abbreviations should only be used sparingly. Acronyms such as *FIRST* should be consistently used unless the expanded version is needed. “FRC,” “FTC,” and “FLL” should only be used when working directly with a *FIRST* audience. For non-*FIRST* audiences, a section of any text document or slideshow should be dedicated to describing the *FIRST* acronym. The first appearance of associated acronyms should then be “*FIRST* [Program Level] (Program Acronym).” The acronym may be used from then on. “*FIRST*” should be italicized at all times.

STEM, another common acronym, should be in acronym form for all STEM audiences, and should be expanded once for all non-STEM audience. This provides clarity and prevents any confusion.

All acronyms should always be fully capitalized.




# Table of Contents Formatting

## Usage

Tables of contents provide vital information regarding what a document contains and where information can be found within a document.

Tables of contents main font size should be the size of the body text within the document. The section font size should be bolded and two-points larger than that of the body text. Subsections should be indented to show they are subsections of the main idea.

 WorBots 4145 Cultivating a Culture of STEM in Worthington, Ohio		Standardized page header
<b>Table of Contents</b>		
<b>Phrasing</b>	<b>04</b>	
Team Name	05	
Team Mission and Slogan	06	
<b>Team Logos</b>	<b>07</b>	
Vertical Logo With Gears and Text	08	
Gears	09	
Horizontal Logo With Gears and Text	10	
Logo Modifications	11	
<b>Design Elements</b>	<b>12</b>	
Line Structures	13	
Line Formatting	14	
Shapes	15	
Shape and Line Discontinuity	16	
<b>Coloration</b>	<b>17</b>	
Primary Colors	18	
Accent Colors	19	
Color Usage	20	
Background Exceptions	21	
Color Placement	22	
<b>Typography</b>	<b>23</b>	
Hemi Head	24	
Rockwell	25	
Textual Elements	26	
Numbers	28	
Distancing and Line Spacing	29	
Alignment	30	
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Formatting	49	
Main Programming Architecture	50	
Code Structure	51	
<b>Team Attire</b>	<b>52</b>	
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03



## **Multi-Page Documents**

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### **Page Sizing and Proportions**

All multi-page documents must follow the previously outline standards for paper sizing and margins. The header for the second through the last page must be the traditional WorBots header, and the title page must follow defined standards. In the event that content of one section of a multipage documents runs over to another page, a page break must be used before a change in content. At no point should one page running over be on the same page as the beginning of a new subsection.

In the event that there are multiple subsections within one larger section of a document, multiple subsections may be on one page; however, the start and end of a subsection must be on the same page when that subsection length does not exceed a page. If a subsection not exceeding the length of one page starts on a different page than it ends, that subsection should be relocated via a page break.

At no point should an image run over a page or bleed into the margins of a page. If an image must occur on multiple pages, that image must be duplicated and placed within proper margins of a page. Text should not be wrapped around images, but it may occur next to and above or below images with margins at least one-eighth of the image wide between the image and the text.

### **Page Numbers**

All multipage documents must include page numbers. The title page must be included in the page count; however, there should never be page numbers on the title page.

Page numbers should be increasing by one each page and should be on every page—always in the rightmost corner. At no point should page numbers be placed in the left corner nor omitted from any non-title pages within a document. Section introductions only including the title of the section are not required to have page numbers; however, they must be included in the count for page numbers. If the page before a section introduction is page number four, then the page after that section introduction should be page number six.

### **Connection**

Pages should be connected via three-ring binders of either one-inch or three-inch thickness. Pages in binders should be held by page protectors; the paper itself should not be hole punched. For documents not leaving the workshop, staples or binders may be used. Under no circumstance should paperclips or coils be used to hold together multi-page documents.



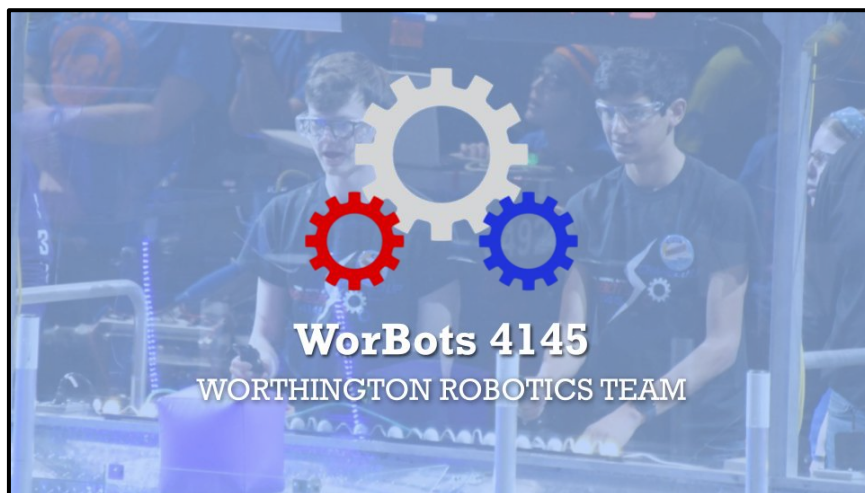
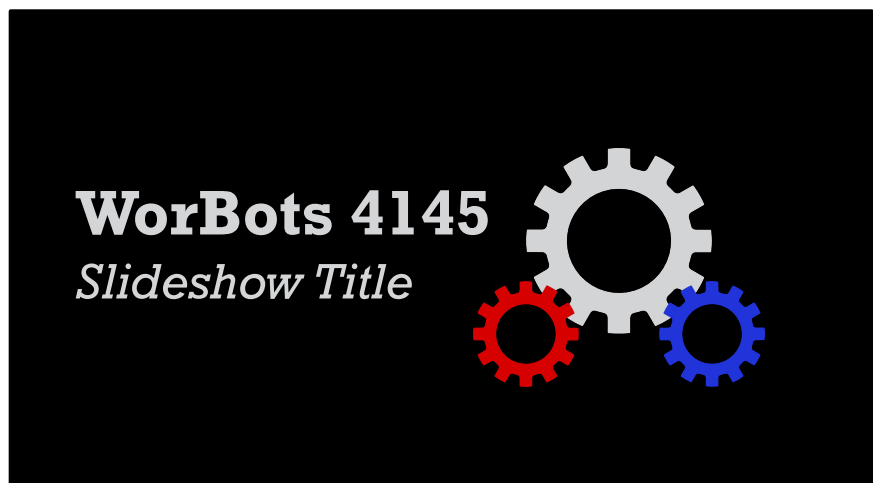
## **Slideshow Presentations**

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### **Slideshow Usage**

Slideshow presentations are used to integrate textual, visual, and verbal information to enhance audience understanding of what is being presented to them. These presentations are not used at competitions on the WorBots, but they may be used when speaking to sponsors or the Worthington School Board to provide further insight into what we are discussing.

This format is often used when presenting within the team or to the Worthington community, as it follows our team image more closely and corresponds with our community image. It is simplistic and focused on any images and graphics included.



This format is used for presenting to sponsors, as it includes more of our team in-action, which aligns more with what we are discussing when working with sponsors. It corresponds with team branding standards but branches out to include more images and graphics of the team.



## Information Cards

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### Business Cards

Business cards should be all black. The team logo (vertical with gears and text) should be on the center on one size. The other size of the business card should include the team address, email, website, and social media accounts. Business cards should not include any form of year nor date.

No content other than the team website or email is to be linked. There should never be QR codes or seasonal information included on business cards. All brand standards defined apply to business cards. The business card layout may periodically change.



### Robot Information Cards

Information cards for the robot should follow all established branding guidelines. They must include an up-to-date photo of the season's robot, the robot logo, the season's logo, the team's logo, and relevant information regarding the performance of the robot and drive team. The image of the robot must be on the left side of the information card. The text regarding the robot should be in bulleted form to the right of the image of the robot. All logos should be significantly smaller than the robot image and should not clutter the page. The background of the robot information card should be black or one of the accent colors.

The information cards should be created on a competition-by-competition basis and may be restructured between competitions; however, formatting should remain consistent—only data should change. Links to sources with up-to-date information are permitted to prevent inaccuracy; however, they are not required.





## Social Media

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### Graphics

Graphic posts should include the WorBots logo. They should use the primary red, blue, and grey and include the WorBots logo when possible. No posts on any WorBots social media accounts should include last names, but they may include last initials. Social media graphics should be informational but minimal. They should have, at minimum, half inch margins. The purpose of these graphics is to provide information above all else. It is important that information is conveyed clearly and effectively.



### Language and Hashtags

All language should assume that those viewing the post are unfamiliar with the *FIRST* program. Acronyms specific to *FIRST* should be expanded, and terminology should be generally understandable. If, for some reason, terms must be specific to a *FIRST* audience, context surrounding those terms should be sufficient for understanding the meaning. Any text included within images should also be included through captioning (though it doesn't have to be word-for-word) to ensure accessibility within all social media content. Image descriptions as available through social media platforms should be used. Emojis should not be used except for in biographies and highlights.

Hashtags specific to the *FIRST* program (such as #morethanjustrobots) may be used on social media posts. Those specific to events such as holidays or regionals may also be included as relevant. Any hashtags used should be directly relevant. While they are engaging, they should be used sparingly.

### Biographies

All social media biographies must read:

“Worthington City Schools *FIRST* Robotics Team  
Cultivating a Culture of STEM  
Engage, Inspire, Impact”

The team Linktree should be linked when possible. If a platform does not allow Linktree, the team website should be linked.



## Published Photos

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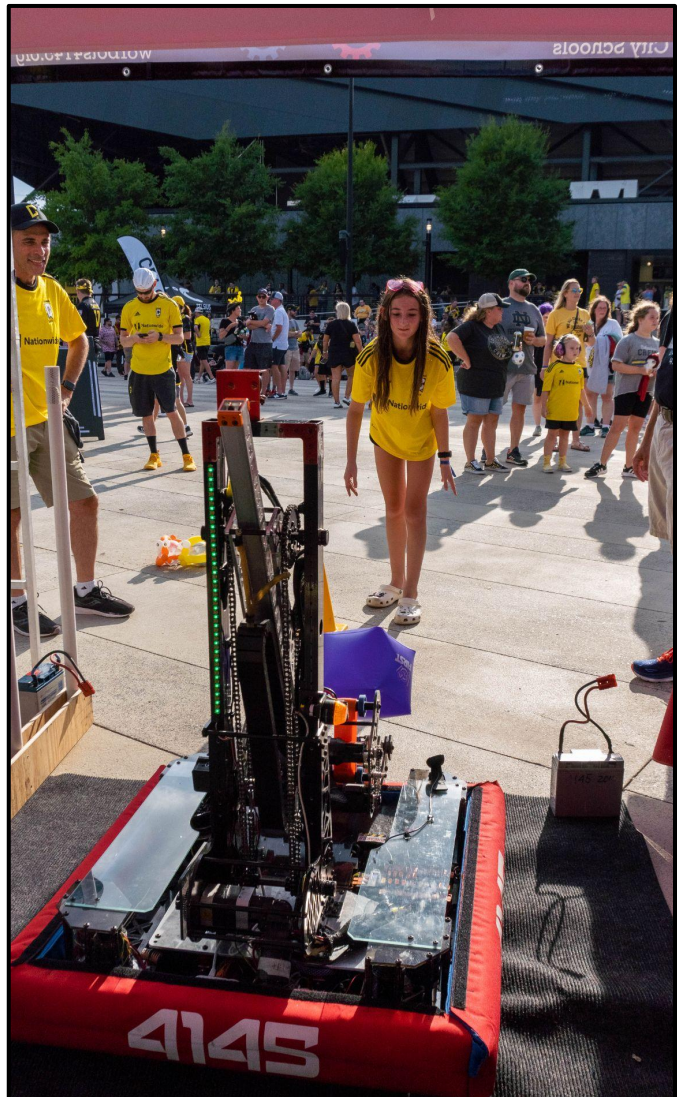
### Post Photos

Post photos should highlight what the focus of an event was, what occurred, and who the audience was. They should give good context as to the number of people at an event. Photos should focus on a whole group as well as on specific interactions between individuals or groups of people when contextually possible.



### Instagram Story Photos

Instagram story photos should be active and only posted during an event. They are meant to highlight what is going on in the moment, and are often followed by a formal post. The upper margin should not have important information, as this is often covered by an automatically placed title. Post text should not unintentionally cover people or the robot, and is most often at the bottom of the screen one half inch or higher above the bottom of the photo. In the event that Rockwell is not compatible with the platform, the closes serif font should be used. Colors should be matched to brand standards as with all other graphics. In addition to any text describing the event, those involved with the event—sponsors, schools, or organizations—should be tagged in addition to *FIRST*. Landscape photos should not be stretched in order to fill the Instagram screen.





## Published Videos

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### Thumbnails

Thumbnails should have a darker color palette as opposed to bright colors. They should not be overly textual, though they may include text. Thumbnails should include more than simply the team logo, but they should not be overly intricate. All thumbnails should abide by all previously defined within the branding standards.



### Content

All videos must be high-quality and professionally-appearing. Background noise should be reduced when possible and videos should be focused on the topic at hand. All music added to videos must follow standards established by *FIRST* as well as the platforms the video is being uploaded on. Videos used should be as recent as possible unless otherwise necessitated by the nature of the video being produced.

In videos, pacing must be consistent and angles should remain the same across media that is being used.. At no point should contrasting pacing or coloration be used together. Movement by the camera itself should also be minimized in order to reduce distractions within the videos.

Videos and their audio should be clear from external interference. Audio should be clear of outside noises. Music should be at an adequate volume. When people are speaking within videos, their voices should be clearly audible above music or any other audio within the video. If multiple people are speaking at once, all people should be equally audible within audio. Volume should be consistent across speakers.

### Seasonally Produced Videos

- ⚙ Robot Reveal
- ⚙ Impact Award Video
- ⚙ Season Recap
- ⚙ Engineering Day Interviews
- ⚙ Miscellaneous Informational Videos



## Buttons

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### Standard Pin

This pin includes the WorBots logo on a black background. This is a seasonally recurring pin and is handed out at community outreach as well as at *FIRST* events. This pin is the most recognizable pin associated with the WorBots.



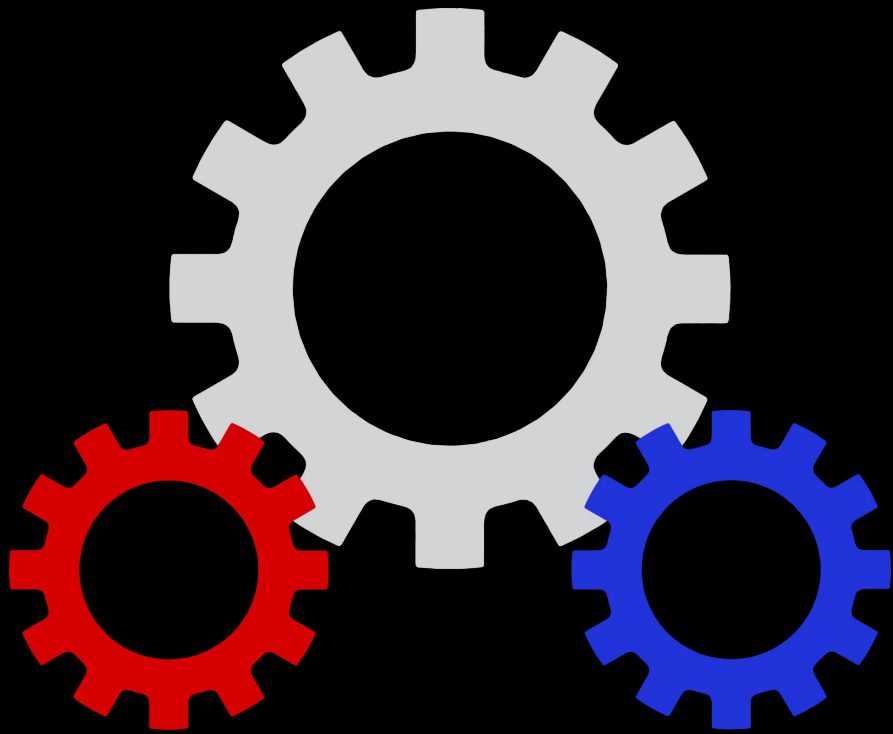
### Slogan Pin

This pin includes the “engage, inspire, impact” slogan of the WorBots. It is used to represent the team and highlight our focus. This is a seasonally recurring pin alongside the standard pin and is only handed out at *FIRST* events—not at community outreach events.

### Season Pin

This pin is subject to change based on the game for each season, though it is expected to follow all team branding guidelines. This pin is handed out at *FIRST* events as well as at community events but is not to be given out following the conclusion of a season’s adjacent off-season.





**Robot Branding**



## Robot Design

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### Robot Coloration

To make our robot easily recognizable and visually appealing, all robots should use black as a primary color with red, blue and grey accents. These accents must follow the WorBots primary colors as defined previously. Accent colors defined in the branding inventory should not be used unless primary colors are not available. Through this pattern, the robot image is integrated with the team image and team documentation—all of which follow a structure of black backgrounds with red, blue, and grey included stylistically. On the competition field, this further ensures that the robot exists as an extension of our team and the values of our team and can be recognized as such.

### Material Finishes

All aluminum parts should be powder coated in the appropriate color. This can be determined based upon the primary colors and accent colors when necessitated. All polycarbonate must be dark grey smoked.

Exceptions to these guidelines can be made only in the event that the coloration or powder coating interferes with the function or performance of the part itself. In the event the robot coloration or finishing cannot be congruent with previously defined standards, team leadership should be consulted to maintain branding to the best of the team's ability.

### Robot Name

The robot name is to be displayed in a clearly visible area of the robot in either black or white, such that it contrasts from the color of the background material. It should be clearly visible within a reasonable range. The robot name may have its own design separate from that of the season but all versions of it must be congruent with team branding standards. The logo may not include colors outside of those permitted by the team branding standards. The robot name is at the discretion of team leadership and changes annually. All team names must reflect the values of the WorBots as well as *FIRST*.





## Bumpers

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### Competition Bumpers

At competitions, bumpers are one of the first and most easily-recognizable ways by which a team and its robot are associated. As such, bumpers must be congruent with team branding standards and reflect the brand and professionalism of a team. When bumpers are seen, they should be seen not just for the numbers on them but for the team they are representing.

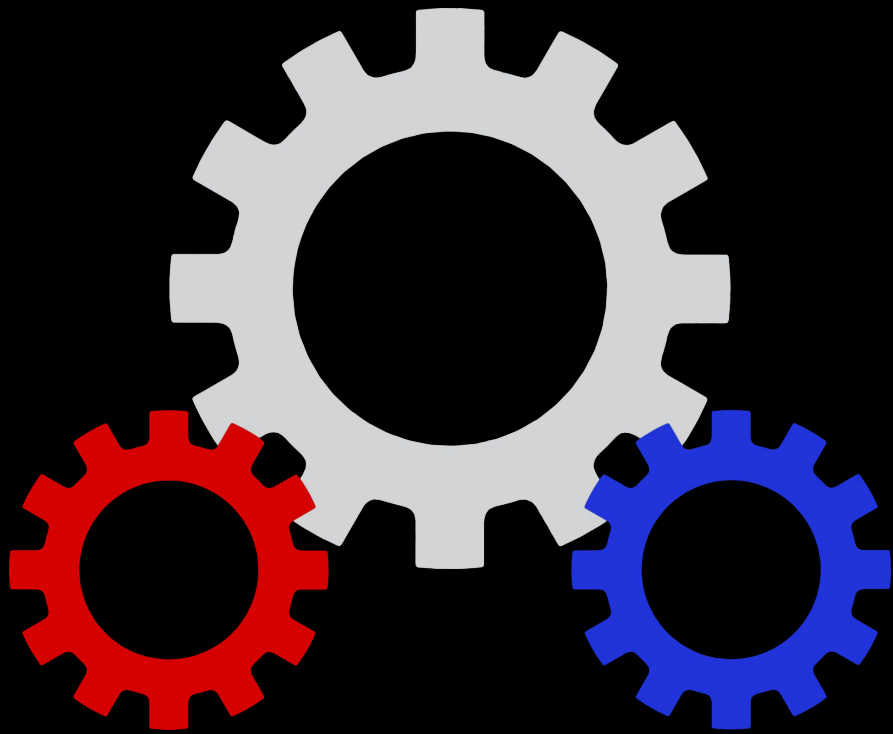
All competition bumpers are to be *FIRST* Robotics Competition-compliant—with one set of reversible bumpers in blue on one side and red on the other. A “4145” numeral should appear in matte white once on each face of the robot bumpers, all appearing with closed fours. Numbers should be approximately four inches tall and printed only in the Hemi Head font approved for graphics previously. Numbers should be aligned with the center of each face of the bumpers as well as one another.

### Practice Bumpers

The bumpers are to be *FIRST* Robotics Competition-compliant with one set of black bumpers. A “4145” numeral should appear in matte white once on each face of the robot bumpers, all appearing with closed fours. Team numbers should be approximately four inches tall and printed only in the Hemi Head font approved for graphics previously. Numbers should be aligned with the center of each face of the bumpers. Sponsor logos may also be included in matte white such that they do not impede the visibility of the “4145” numeral to ensure effective matchplay.

Sponsor logos should follow all defined proportions and standards of the sponsor’s branding. All sponsors—regardless of sponsor level—should be included on the robot bumpers when possible.





**Team Attire**





## **Team Shirt Design**

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### **General**

The WorBots team shirt should be black; under no circumstances may this be altered. No seasonal elements should ever appear on the shirt.

### **Front**

The front of the team shirt should display solely the vertical logo with gears and text. This logo should be centered, and all colors should directly match those previously defined in the brand standards. Above and below the gear logo, there should, at minimum, be six inches of space for just the shirt. No text should be included outside of the text present in the vertical logo with gears and text.

### **Back**

At no time should text nor images should appear on the back of the team shirt. The back of the team shirt should be plain black.



## **Game Shirt Design**

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### **General**

The WorBots game shirt should be black; under no circumstances may this be altered.

### **Front**

The front of the game shirt should be themed to the *FIRST* Robotics Competition game for the season. The theming of the shirt should not include the official logo for the seasonal game. For example, the shirt for *FIRST* Charged Up included a lightning bolt to emulate the energy theme without including the Charged Up logo itself. The front of the shirt should also include “Engage, Inspire, Impact” as well as the team name. Despite seasonal game colors, game shirt colors should follow the team colors.

### **Back**

The back of the shirt should triple diamond, diamond, platinum, and gold sponsors in order of sponsorship. These logos should not be in color—they should be white. Triple diamond sponsors and diamond sponsors should have the largest logos, with triple diamond having the largest followed by diamond.



## **Quarter Zips and Polos**

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### **General**

The quarter zips and polos should be black. Under no circumstances may this be changed. No seasonal elements may be included on the polos nor quarter zips.

### **Front**

On the top left of the polos and the quarter zips should include an embroidered WorBots gear logo, with 'WorBots 4145' embroidered below, horizontally aligned. No images or graphic elements should appear elsewhere on the quarter zips or the polos.

### **Back**

At no time should text nor images should appear on the back of the quarter zips or polos. The back of the quarter zips and polos should be plain black.



## **General Attire Guidelines**

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### **Meeting Attire**

- ⚙ All meeting attire must meet the dress code guidelines established by Worthington Kilbourne High School and the Worthington City School District.
- ⚙ Shoes should be closed toed and flat
- ⚙ Jewelry that dangles is not permitted
- ⚙ Loose clothing is not permitted
- ⚙ Hair must be tied back
- ⚙ Jeans should not be hazardously ripped

Clothing should not be an impediment to safe and productive work within the workshop. At no point should clothing pose a safety threat to individuals or those around them.

### **Community Outreach Attire**

All community outreach attire should reflect the values of the team. Team shirts should be worn at all times. Appropriate pants and shoes for the location and activity should be worn.



## **Special Case Dress Code**

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### **Quarter Zips**

Drive and presentation team members have quarter zips, which are worn on their respective competition days. The logo as well as the team name are embroidered and thus do not need to follow the Rockwell or Hemi Head font, though closed fours are still required. Quarter zips are slightly off-black; however, they must still appear as a black-adjacent dark grey. This dark grey color must provide significant contrast to the embroidered grey gear on the logo.

Even on days where these members are wearing quarter zips, they must be wearing the appropriate team shirt with it. They must also adhere to all provisions regarding pants at competitions.

### **WorBots Sweatshirts**

Many members of the team own sweatshirts mimicking the format of the WorBots team shirt. These sweatshirts are acceptable attire any day within the stands and outside of the competition venue but should not be worn in place of the team t-shirt in the pits, while driving, or in interview rooms.

### **Presentations**

During presentations to companies, the school board, or other members of the community, attire is typically more formal than competition attire. Black dress pants—not leggings—should be worn. Team shirts or quarter zips should be worn. Dress shoes should be worn for presenters and dress-adjacent, safe shoes should be worn by anyone in the workshop area or demonstrating the robot.

### **Conferences**

Conference attire should follow WorBots team colors but should match the formality of the conference otherwise. All presenters should be coordinated in partnership with team leadership.



## Competition Attire

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### Practice Days

All team members should be wearing a past team shirt. Drive team members should coordinate attire for practice days and should remain consistent. While attire is less formal on practice days, sweatpants and leggings should be avoided. Team attire should reflect the values of the team and *FIRST*. All hoodies and sweatshirts should be team apparel.

### Competition Days

On competition days, all team members are expected to wear the WorBots season game shirt. The game shirt changes each season. It is characterized by a logo relating to the theme of the season and the WorBots logo on the front of the shirt, and the back of the shirt includes sponsor logos in all-white or all-grey. Pants should either be khakis or black pants. Leggings, shorts, blue jeans, and non-team apparel are not permitted.

Presentation teams wear quarter zips and black pants with their game shirt. This is also worn to any presentation rooms, though outside of presenting, they may wear just the game shirt and black pants.

### Elimination Days

On elimination days, all team members are expected to wear the WorBots team shirt. The team shirt is consistent across all seasons. It is characterized by a black shirt with the vertical logo with gears and text on the front. Pants should either be khakis or black pants. Leggings, shorts, blue jeans, and non-team apparel are not permitted.

The drive team wears quarter zips and khakis with their team shirt. During matches, this is worn. Outside of matches, they may wear just the team shirt and khakis.

