

Coaches' Guide

**Wonder League Robotics Competition
2017-2018**

Welcome to Year 3!



*updated 10.11.17

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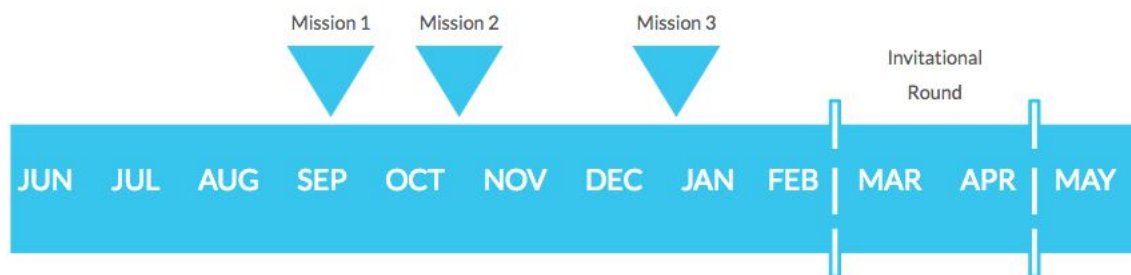
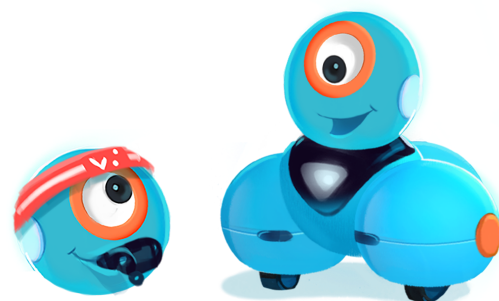
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QUICK OVERVIEW

The requirements for participation in this year's Wonder League Robotics Competition are quite simple:

- **Embrace your coaching responsibilities:** You, as the coach, need to be at least 18 years old. As a coach, we ask that you be the organizer and cheerleader, but that you also agree to be the facilitator for your team -- you are guiding and mentoring, not doing or solving.
- **Pick an age category for your team:** Team members need to fall into one of two age categories: ages 6-8 or ages 9-12. To be eligible for a 6-8 team, team members have to be turning 6 and/or turning no older than 9 as of Sept. 1, 2017-Aug. 31, 2018. To be eligible for a 9-12 team, team members have to be turning 9 and/or turning no older than 13 as of Sept. 1, 2017-Aug. 31, 2018. In short, they need to fall within the age range at some point during the competition period.
- **Register your team:** Watch the video: <https://youtu.be/c0daGh5zWLO> And register all of your teams via the [WLRC Registration Survey](#) by Dec. 31, 2017! We suggest a team be comprised of at least three members, but we do understand if an individual wants to form his/her own team. Teams cannot have more than five team members (so that everyone can contribute!).
- **Join our [Edmodo](#) community:** All communication will be distributed and collected digitally. You will need to create ONE free TEACHER account on Edmodo (www.edmodo.com) to receive all competition information. Watch this video for more details about the registration process: <https://youtu.be/c0daGh5zWLO>
- **Establish your timeline:** To welcome more participation, this year's competition consists of three initial rounds of missions, with one invite-only final round. The timeline is extremely flexible as we'll be releasing three missions from September through January, with all assignments due by Feb. 16, 2018, for those who want to be considered for the final Invitational Round.

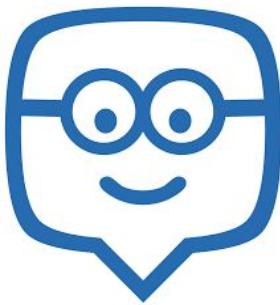


- **Establish a work space:** You will need a dedicated space to gather, practice, problem-solve, and celebrate! We recommend that you have enough floor space to accommodate a 5x7 grid with 30 cm squares. See the list of recommended Materials & Equipment in this guide.
- **Determine a team work schedule:** Each mission should take about 12 hours to complete. This year's timeline is flexible, so, for instance, your team could meet for 2 hours a week for 6 weeks, or you could meet for a couple longer sessions to work on a mission. Determine a schedule that works best for your team.
- **Celebrate milestones:** For the first three missions, we will recommend ways you can recognize your team's accomplishments. You may want to consider organizing with other local teams to compete and celebrate within your community. For the Final Invitational Mission, Wonder Workshop will be judging and awarding a \$5,000 STEM grant grand prize to one team in each age category.

REGISTRATION

Watch this video about the registration process: <https://youtu.be/c0daGh5zWLO>

First, begin the registration process by **filling out this survey**: <http://bit.ly/2wTGAVo>. It is editable should you need to go back and make changes; just follow the edit link emailed to you post submitting the survey.



Edmodo

This year, we've chosen to partner with Edmodo so that we could provide an easy-to-use community for our Wonder League Coaches. You will need to sign up for one TEACHER account (even if you are a parent) on [Edmodo](#), a popular communication platform used by schools and organizations across the globe. We will be hosting a cohort of coaches for ages 6-8 and another cohort for ages 9-12. Edmodo will allow us to streamline our communication with all Wonder League coaches.

Furthermore, Edmodo will allow you to message other coaches within your cohort so you can ask questions, provide advice, and exchange best practices. [Check out this blog article](#) for tips about using Edmodo. We're excited to host this virtual community!

(OPTIONAL) And, since you've signed up as a coach through a teacher's account on Edmodo, you can set up your own Edmodo ["class" for your team members](#) for free at any time. Edmodo is COPPA compliant and ensures a safe communication platform for kids under the age of 13. Read more in [Edmodo's privacy policy](#). However, these team groups are optional as we know that not all kids have access to devices or the internet. Please decide what are the best ways to keep in touch with your team members throughout the competition.

Wonder League Coaches

Anyone can be a coach! A coach just needs to be at least 18 years old, but could be a parent, family member, teacher, after-school facilitator, mentor ... really anyone who wants to help encourage kids in collaborative coding challenges! You just need to be willing to help organize and motivate a team of kids ages 6-8 or 9-12. See our [Coaches' Code of Ethics](#), also at the end of this guide.

Wonder League Teams

Find helpful promotional materials to recruit teams this year in the Coaches' Cohort main folder. Collaboration, cooperation, and teamwork are key skills that are encouraged throughout the missions. One child can make up a team, but ideally a team has at least three team members. By working as a team, kids are able to learn about the benefits of collaboration! Teams can have no more than five members, as we want all to contribute and switch between roles and responsibilities. To be eligible for a 6-8 Wonder League team, members have to be turning 6 and/or turning no older than 9 as of Sept. 1, 2017-Aug. 31, 2018. To be eligible for a 9-12 Wonder League team, team members have to be turning 9 and/or turning no older than 13 as of Sept. 1, 2017-Aug. 31, 2018. In short, they need to fall within the age range at some point during the competition period. Register all of your teams via the [WLRC Registration Survey](#) by Dec. 31, 2017!



EXTENDED COMPETITION FRAMEWORK

Based on feedback from the last two years, we decided to expand the Wonder League Robotics Competition to invite more participation. We will be releasing challenges in three separate rounds: Mission 1, Mission 2, and Mission 3. The missions will get progressively more and more complex, but the challenges will be scaffolded to encourage success (and learning!).

From the robots and the apps to the reflection and evaluation processes, we will be providing structured guidance to take your teams from eager beginners to devoted veterans. We know that not all coaches are steeped in the worlds of coding and robotics, so we want to make this experience less taxing on you and more beneficial in a multitude of aspects for your team members. All rounds will encourage computational thinking, teamwork, design thinking, storytelling, and good old perseverance and grit (aka, a growth mindset!).

First Three Missions

First, register your team. This year, you and your team can decide if you are participating in Mission 1, Mission 2, and/or Mission 3. We understand that your schedules may not allow for

participation in all three rounds, but remember that you can complete the three missions anytime between Sept. 18, 2017-Feb. 16, 2018. All submissions are due no later than midnight PST on Feb. 16, 2018.

- Competition Window: Sept. 18, 2017-Feb. 16, 2018
 - Mission 1: to be released on Sept. 18, 2017
 - Mission 2: to be released on Oct. 30, 2017
 - Mission 3: to be released on ~~Jan. 1, 2018~~ Dec 4, 2017
- Deadline: All submissions due no later than midnight PST on Feb. 16, 2018

Each mission will take an average of 2 hrs/week for about six weeks, meaning a total of about 36 hours for all three missions (remember that you have about five months to complete them all!). The mission challenges, materials, and assignments will be outlined in kid-facing “Mission Logbooks” on the above release dates. The missions follow a progression, walking students through increasingly advanced coding concepts, intricate objectives, and reflection activities.

For each mission, we will be giving your team assignments to submit. Wonder Workshop will not be judging the submissions of these first three missions. Instead, we will track the number of assignments your team completes. We will award team participation points for each assignment your team completes.

Since we will not be judging the first three missions, we will be providing you with **Mission Solution Guides**, which will contain solution examples and sample judging rubrics, plus a [Celebration Pack](#) with suggestions for ways to recognize your team members locally and ways to applaud their accomplishments within your community (neighborhood, school, town, or state). Watch for the **Mission Solution Guides** a couple weeks after each Mission release date.

FIRST THREE MISSIONS

Materials & Equipment

Coaches will need to be able to:

- Have access to an internet-enabled device to find all relevant information and resources on Edmodo
- Download and print certain kid-facing materials
- Have access to a digital camera to document the learning experience (a cell phone works well!)

Each team will need at least:

- One Dash and one Dot robot
- Access to Blockly and Wonder (free apps)
- A [compatible device](#) for teams to use
- A 5x8 gridded mat (30 cm squares) on the floor (we will share DIY mat solutions) -- label the longer side 1-8 and the shorter side A-E.

See our new
Education Solution
packs, which bundle
products you may
need for teams!
<https://store.makewonder.com/#/education>

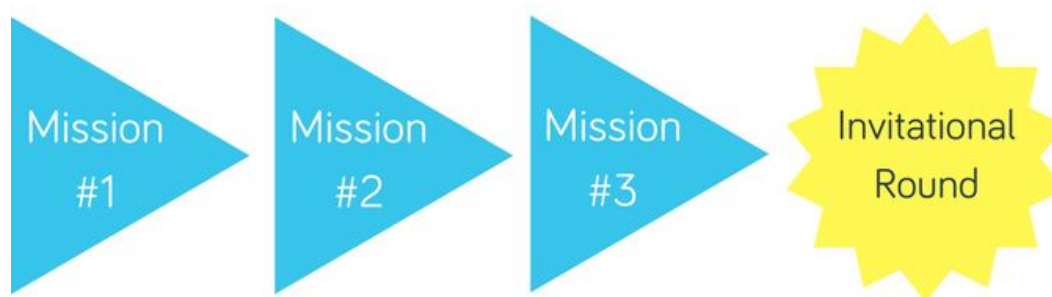
- Mission supplies (to be outlined further for each mission, but expect items like plastic cups, cotton balls, paper clips, and ping pong balls)
- Some low-resolution prototyping and design materials (e.g., LEGOs, tape, pipe cleaners, paper towel rolls, etc.)

Last, you may want to consider how you will recognize your team's accomplishments. We will provide recommendations in our [Celebration Pack](#), from printing our provided accomplishment certificate to hosting a celebratory event. If you need support in the way of extra hands, time, or supplies, please see our suggestions in the [Community Hosting Guide](#).

Mission Goals

This year, your team can decide to participate in one, two, or all three missions (they are scaffolded and become progressively more complex). Wonder Workshop will not be judging the first three missions. Instead, you can evaluate and score your team's solutions with the ideas outlined in the [Submission Process & Solution Guide](#). And then you can celebrate accordingly -- check out the [Celebration Pack](#)!

For those of you who do want a chance to be invited to the Invitational Round, you will need to follow the guidelines outlined in the [Submission Process & Solution Guide](#). Basically, coaches will need to submit the asked-for "evidence" for *all three* missions by February 16, 2018 (you can submit as teams complete or all at once via the form). We will be awarding team participation points for each mission's evidence and inviting 1,000 teams to the Invitational Round.



INVITATIONAL ROUND

This year, the Wonder League Robotics Competition will culminate with an invitation-only final round. If your team does want to be eligible to compete in the final Invitational Round (from March 5-April 27, 2018) you will need to participate in all three missions and turn in all submissions by Feb. 16 at the latest to receive team participation points.

Follow the guidelines in the [Submission Process & Solution Guide](#).

The final Invitational Round will be open to no more than 500 teams for ages 6-8 and 500 teams for ages 9-12 (1,000 teams in all). If more than 500 teams fulfill all criteria within an age category, we will use a tie-breaking rubric and look back at Mission 3 submissions -- we will share this rubric when we release Mission 3.

Teams participating in the Invitational Round will complete the final mission by April 27, 2018. Their submissions will be judged by Wonder Workshop using a published rubric. The top five teams in the 6-8 and 9-12 age categories will all receive official certificates, competition t-shirts, and Dash robots. We then will award one \$5,000 STEM grant grand prize to the winning 6-8 team and one \$5,000 STEM grant grand prize to the winning 9-12 team.

If your team does not want to compete for a spot in the final Invitational Round, we still welcome your participation in the first three missions! Additionally, we will make the final Invitational Round mission public so that any team can challenge themselves, but only invited teams will be competing for the grand prize of a \$5,000 STEM grant.



LOCALIZING THE COMPETITION

Community Support

This year, we are offering a [Community Hosting Guide](#) for community organizations and companies that want to support kids' achievements in the first three rounds of missions.

To rally local support to host one or all of the missions, first consider the community associated with your team. Is your team school-based? Or is your team part of an after-school network? Perhaps your team is more affiliated with your town or city. Or maybe your team is made up of employees' kids from a local company. You may want to reach out to these related communities, networks, and corporations to ask if they may be willing to support and celebrate your team.

Check out the [Community Hosting Guide](#) to find some suggestions and recommendations regarding ways to organize, fund, judge, and celebrate your local team(s). Additionally, find ways to publicize your team's accomplishments with our [Local Media Kit](#).

FAQs: FREQUENTLY ASKED QUESTIONS

How do I register?

Follow these three steps outlined in [this blog article and video](#):

1. Complete the [WLRC Registration Survey](#).
2. Sign up for ONE teacher account.
3. Dig in! Find share resources in the FOLDERS section within each Edmodo Coaches' Cohort.



Where do I find information and resources for this year's competition?

You can visit our website at education.makewonder.com/robotics-competition, but all specifics will be available within our Coaches' Cohorts hosted on [Edmodo](#). All communication and sharing of resources will be done within the two Coaches' Cohorts.

What is the coach's role?

We have a code of ethics for coaches (individuals age 18+)! The Wonder League Robotics Competition is meant to be kid-led and kid-driven. Therefore, you are on board to be a facilitator, providing guidance and encouragement. You will mainly be responsible for downloading material, explaining the objective(s) and process, and submitting evidence for each mission assignment. But all of the assignments should be completed by kids! Believe us, as former educators, we can tell the difference. While our kids are quite technologically savvy these days, they still stamp their work with a kid's authentic point of view and tone; let that shine through! Team participation points are awarded based on evidence of completion -- not professional polish.

How do you define a team?

A team is defined as any interested kid or kids ready for a coding and robotics challenge. Teamwork takes patience, dedication, communication, and of course, celebration. A team must have an adult (at least 18 years old) to act as a coach, who will facilitate the process by providing access to the documents and submitting teamwork. A team can be formed by neighborhood kids, after-school groups or clubs, or classmates in a school -- really anything goes! We'd even be curious to see how a virtual team could collaborate. Teams can have one to five members, and must meet the age requirements.

What are the age requirements?

To be eligible for a 6-8 Wonder League team, team members have to be turning 6 and/or turning no older than 9 as of Sept. 1, 2017-Aug. 31, 2018. To be eligible for a 9-12 Wonder League team, team members have to be turning 9 and/or turning no older than 13 as of Sept. 1, 2017-Aug. 31, 2018. In short, they need to fall within the age range at some point during the competition period.

How much does it cost to participate? What materials are necessary?

While there is no cost to enter and participate in the Robotics Competition, you will need some materials and supplies for each mission. Teams will need to have a Dash and Dot robot, and access to Blockly and Wonder (free apps) on a [compatible device](#). They will need some basic prototyping and design materials as well, plus space for a 5x8 30-cm square gridded mat/area (long side labeled 1-8 and the short side labeled A-E). As a coach, you will need access to a internet-enabled device to find all relevant information on Edmodo. You will need to be able to download and print certain kid-facing materials. And you will want access to a digital camera to document the learning experience (a cell phone works well!)

How can I encourage community support and involvement?

See our recommendations for recognizing teams' achievements in our [Celebration Pack](#). We also provide suggestions in our [Community Hosting Guide](#) if you want to reach out for local community support and involvement. Plus check out the **Local Media Kit** to help garner community attention for your teams' accomplishments.

What is this year's process and timeline?

This year, we are running the Robotics Competition differently than the first two years. In order to encourage participation and accommodate more teams' schedules, we are releasing three missions, which can be tackled from Sept. 18, 2017 to Feb. 16, 2018. All mission submissions will need to be turned in for team participation points by 11:59 pm PST on Feb. 16, 2018. The three missions are scaffolded in terms of learning objectives and story, so if you want to complete all three, we recommend doing so in the suggested order. If you participate in all three missions and are awarded all of the required team participation points, you may be invited to the final Invitational Round:

- Sept. 18, 2017: Mission 1 released
- Oct. 30, 2017: Mission 2 released
- Dec 4, 2017 ~~Jan. 1, 2018~~: Mission 3 released
- Feb. 16, 2018 (11:59 pm PST): All mission assignments must be submitted
- Feb. 26, 2018: Invitational Round teams notified
- March 5, 2018: Invitational Round Mission released
- April 27, 2018: Invitational Round Mission criteria due
- May 2018: Winners announced

What if we join after the first mission is released in September?

No problem! You have until Dec. 31, 2017, to register your team(s) via the [WLRC Registration Survey](#). You can complete the three missions at any time between Sept. 18, 2017 and Feb. 16, 2018. If you want to be eligible for the spring Invitational Round in March and April 2018, you will

need to have completed and submitted all missions' assignments by 11:59 pm PST on Feb. 16, 2018 to receive the necessary team participation points. Based on team participation points, we will be inviting teams to compete in the final Invitational Round (with possible tie-breaking criteria).

Does my team have to participate in all three missions?

Not really, but we want to encourage teams to complete them all! The Wonder League is all about the learning experiences, more so than the competition. You will need to register your team(s) via the [WLRC Registration Survey](#) and join our Coaches' Cohorts on Edmodo, but you and your team can decide how many of the three missions you want to complete. You may decide that you want to just engage in one six-week mission, and we'd love your participation! We will be providing you with solutions in the [Submission Process & Solution Guide](#) and celebratory ideas with our [Celebration Pack](#). Still, we're excited to see which teams are going to take on the challenge of all three missions to be considered for the final Invitational Round.

How can I evaluate my teams' progress?

If you want to evaluate your teams' solutions, you can use the [Submission Process & Solution Guide](#) to find sample solutions and sample rubrics for judging. Then you can find recommended ways to recognize your team members' accomplishments throughout their learning journey in the [Celebration Pack](#).

How does my team get invited into the final Invitational Round?

If you want a chance to be invited into the final Invitational Round (March 5-April 27, 2018), you will need to participate in all three missions, and you will have to complete and [submit all of the three missions' assignments](#) to receive the required amount of team participation points. We will be inviting 1,000 teams to the final Invitational Round (500 teams for ages 6-8 and 500 teams for ages 9-12). If there are more than 1,000 eligible teams, we will use a rubric to evaluate Mission 3 submissions' thoroughness and thoughtfulness (we will make this rubric available *when* we release Mission 3 on Jan. 1, 2018).

If my team doesn't make it into the Invitational Round, can they still participate?

We will release the mission for the final Invitational Round on March 5, 2018. And we encourage all teams to take on the challenge. However, only the invited final teams will be judged and eligible for the Wonder Workshop prizes.



What is the prize? For the first three rounds, we will provide you with ideas for celebrating your team members' accomplishments and for sourcing local recognition from within your community. Wonder Workshop will provide prizes for the Invitational Round only. The top five teams in the 6-8 and 9-12 age categories will all receive

official certificates, competition t-shirts, and Dash robots. The winning team in each age category will receive a \$5,000 STEM grant to use for STEM-related resources or experiences.

How can an organization or company host a regional Robotics Competition?

We've tried to make it pretty turnkey for a local entity to help organize and celebrate local teams participating in the missions. Feel free to share our [Community Hosting Guide](#) with others.

Coaches' Code of Ethics

We, the Wonder League Coaches participating in this year's Wonder League Robotics Competition, hereby pledge to:

- ☐ Invite all to participate on a team -- no experience necessary
- ☐ Listen, listen, listen
- ☐ Set team goals for this learning experience
- ☐ Answer questions with questions (*"What do you think you should do next?"*)
- ☐ Be enthusiastic coding and robotics cheerleaders, even on the umpteenth test run
- ☐ Recognize kids' dedication and passion, and applaud the team when they fail forward
- ☐ Adopt the mantra of *"Yes, and ..."* as a response
- ☐ Support teams by being a sounding board but *not* an answer key
- ☐ Remain hands-off by not perfecting kids' authentic work (such as fixing typos)
- ☐ Introduce teams to new resources and tools to try, from art supplies to camera equipment to digital presentation tools
- ☐ Embrace creative, out-of-the-box ideas wholeheartedly
- ☐ Remind team members that there's no such thing as bad ideas
- ☐ Support teams by taking care of adult-oriented logistics such as scheduling, finding a convenient practice location, and sharing information with family members
- ☐ Submit all assignments by Feb. 16, 2018 (if your team wants a chance to be invited to the final Invitational Round!)

