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Imagine Cup Junior

**Lesson One – What problem does your team want to solve?**

**Introduction**

Welcome to Lesson One of Imagine Cup Junior! The goals of this lesson are for your students to:

* Learn about what they will be doing across the six lessons of Imagine Cup Junior.
* Form teams of up to six students. In this team they will create their AI concept with this group across the six lessons. (Students can also work alone where required).
* Determine a problem that they want to focus on trying to solve with an AI concept.

In this Educator overview of Lesson 1, we will talk through how this lesson works, the PowerPoint slides that you can use to run your lesson, and some extra activities your students can engage with if they would like.

We have a few different types of activities in each lesson. These include:

Rapid Reflection: A chance for your students to reflect on key questions to help guide their learning.

Sprints: These are short periods where your students need to work to the timer and try to achieve the goals listed on the slide.   
Challenge Check-ins: This is a chance for your students to recap what they have done and think about anything they may want to get done before the next lesson.

Submission Tips: We often include tips to help your students maximize their points through their submissions.

Bonus Activities: If you would like to explore the concepts of this lesson further with your students we also include bonus activities.

Remember you can run these six lessons across one day (in the form of a sprint hackathon), or you can stagger them across several weeks or months.

Let’s get started!

**Lesson Notes**

**Slide 1:** This is a title slide that you can have up at the beginning of the lesson.

**Slide 2:** We have a video introduction. This goes for 2:00 minutes and gives your students an insight into what they will experience with Imagine Cup Junior.

**Slide 3:** This slide is a recap of the video, to restate what Imagine Cup Junior is.

**Slide 4-6:** These three slides are to help you engage your students and explain why you have decided to get involved in the challenge. Feel free to adapt this and reflect some of your own motivations for being in involved with Imagine Cup Junior 2022!

At this point you should be around 5:00 minutes into your 45:00-minute lesson.

**Slide 7:** This slide provides a short overview of the six lessons your class will take part in.

**Slide 8:** There is some likelihood that if your students are new to Imagine Cup Junior, that they may think it is purely a technology challenge, and only for young people who have very strong technology skills. The good news is that Imagine Cup Junior has been created for all students, with all types of skills. Every member of your class can be part of a team that puts forward a great submission, regardless of where their strengths lie. On the next slide we have a short activity to help you encourage your students.

**Slide 9:** Rapid Reflection **-** It is time for your students to take a moment to reflect on what their strengths are. Ask them to look at the list and then choose at least two strengths which they think describe them. Take a moment as a class to reflect on these, with a goal of encouraging your students to form teams where people can bring a diverse set of strengths together. You can also encourage them that to make a better world with AI we need people with skills in science, technology, engineering, math, languages, art, history, economics, ethics, philosophy, psychology, and many other fields!

At this point you should be around 8:00 minutes into your 45:00-minute lesson.

**Slide 10:** Sprint #1 – In the first ten-minute sprint your students will form their team of one to six, aged 13-18. Encourage them during this time to share their strengths and determine how they want to work together across the six lessons of this challenge. This is also a great time to share the PowerPoint Submission template with them so that they can begin to work on this from Lesson One.

At the completion of this first sprint, you should be around 18:00 minutes into your 45:00-minute lesson.

**Slide 11:** Your student teams will now focus their attention on choosing a problem in the world that they would like to solve. On this slide we share a quote that is attributed to Albert Einstein, to encourage your students to choose a problem that will set them up for success in the challenge.

**Slide 12 – 13:** There are five categories that your students can identify a problem in through Imagine Cup Junior. In these next two slides Microsoft’s Chief Environmental Officer, Lucas Joppa, introduces how AI is being used to solve major environmental challenges. Slide 13 is a nine-minute video. If you are having difficulties accessing it, the YouTube link is here: [A planetary computer for Earth - YouTube](https://www.youtube.com/watch?v=y9eJMzZEjlc).

**Slide 14:** AI for Earth, which Lucas Joppa talked about in the video is just one of the categories that your students can identify a problem from to solve in Imagine Cup Junior. The other four are Accessibility, Cultural Heritage, Humanitarian Action and Health.

**Slide 15:** Sprint #2 – In the second ten-minute sprint your students will achieve the following goals:

* As a team they should choose which AI for Good category they want to work in. If they are having trouble choosing, you can direct them to this page: <https://www.microsoft.com/ai/ai-for-good>.
* Once they have chosen a category, they should identify a specific problem that you want to solve. Encourage them to identify problems that are very specific.
* Once they have identified a specific problem encourage them to search for statistics and information on that problem and they can begin to fill out Slide 2 on the Submission template.

**Slide 16:** Rapid Reflection – If there is time have your students do a rapid reflection in their team, and engage with the following questions:

* How did your team work together in that sprint?
* Did everyone have a chance to speak?
* Did you draw on each other’s strengths?
* How can you work together more effectively in your next lesson?

**Slide 17:** Submission tip. Throughout these lessons we will share submission tips, which will help your students to put forward their best possible entry to the challenge. The tips we include in this lesson are:

* Remember you must be in a team of one to six people, with everyone aged 13-18.
* The more specific your problem is the better.
* The judges will also want to see that your team knows about the problem you have identified, so take the time to research it further.

**Slide 18:** Challenge check-in. This is a quick moment to recap what your students achieved in Lesson One. Specifically:

* They learned what Imagine Cup Junior is.
* They formed their team of one to six people, aged 13-18 years.
* They chose a category (from Earth, Accessibility, Cultural Heritage, Humanitarian Action or Health), and then identified a specific problem your team wants to try to solve.
* By this point, they team should be able to fill out some of Slide 1, and Slide 2 in your PowerPoint Submission Template. Perhaps encourage them to complete this before Lesson Two!

**Slide 19:** Bonus Activity - If you would like to support your students to get inspired about each of the different AI for Good categories you can view these short videos:

Earth: https://youtu.be/rQqao37u1wU

Cultural Heritage: <https://youtu.be/h8-0g0rlhKM>

Humanitarian Action: https://youtu.be/7VqH9mVSWlg

Accessibility: https://youtu.be/bbrZ2pvubL0

Health: <https://youtu.be/ii-FfE-7C-k>

**Slide 20:** Judging Rubric - This is the rubric used by the judges to assess your student’s submissions. You can share this with your class and use it to guide their AI concepts as they fill out their PowerPoint Submission Template.

**Conclusion**

Lesson One done! As you can see, this PowerPoint slide deck is set up to step your students through Imagine Cup Junior in a really simple way, and to help them learn about AI and invent a great idea to submit.

Key features that you will see in this slide deck will be continued in the remainder of the lessons including:

* Key learning blocks, often with video content.
* Rapid reflections to check in with your student’s thinking.
* Sprints of 10:00 minutes to help your students achieve tasks.
* Submission tips to help your students put their best possible entry forward.
* Bonus activities for those classes who would like to explore concepts further.
* Challenge Check-ins to make sure students know where they are in the Imagine Cup Junior for Beginners program.

Great work running Lesson One, and have fun preparing for Lesson Two where your students will learn about AI!