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Imagine Cup Junior

**Lesson Four – How to be an AI inventor**

**Introduction**

Welcome to Lesson Four of Imagine Cup Junior! The goal of this lesson is for your students to:

* Dream up their AI concepts and be supported to build their skills as inventors.

In this educator overview of Lesson Four, we will again talk through how this lesson works, the PowerPoint slides that you can use, and some extra activities your students can go deeper with if they are curious to learn more.

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 Hints: We are now in the second half of the six lessons, so your students should be thinking about how to put the best PowerPoint submission forward. We offer some tips in this lesson.

Bonus Activity: If your class are enthusiastic about learning more, they can engage with the bonus activity provided.

By the end of this lesson your students should have a good idea of the AI concept they want to keep improving and then submit to Imagine Cup Junior.

Let’s get started!

**Lesson Notes**

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

**Slide 2:** Challenge check-in. This slide is a check-in to recap what the students have learned and what is coming next!

**Slide 3:** This slide is a visual overview for the students of what they will be doing in Imagine Cup Junior. This is to show them that there are two more lessons after this one, but that the focus of today’s lesson is to invent their AI concept that they will be submitting to the challenge.

**Slide 4:** Rapid Reflection -As a class have a quick discussion to come up with the names of inventors that you can recall and what they invented. To build their confidence that inventors can come from anywhere, ask if they know any great things that were invented in your country! (It might be cool if you bring the names of some local inventors with you from your own research!)

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

**Slide 5:**In the first video of Lesson Four we share some thoughts on the idea of ‘being an inventor’. This is designed to prime your students to confidently step into inventing their AI concept!

**Slide 6-7:** Sprint One – In the first ten-minute sprint of Lesson Four your students can work in their teams to begin inventing their AI concept. Encourage them to take some lessons from the video and focus their efforts on really trying to solve the problem they identified and create something new! We have included the APIs on this slide to remind them of the importance of using these tools.

**Slide 8:** Rapid ReflectionTo bring your class back from the sprint, do a quick reflection on how they went through that sprint, and see how their initial ideas are coming together.

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

**Slide 9:** In the second video for Lesson Four we provide your students with some more innovation tools to help them with their ideas.

**Slide 10-11:** Sprint Two – In the second ten-minute sprint of Lesson Four your students can again work in their teams to begin inventing their AI concept. Encourage them to take some lessons from the second video and continue to move towards a great idea!

At this point you should be around 30:00 minutes into your 45:00 minute lesson.

**Slide 12:**Rapid Reflection– Once again to bring your class back from the sprint, do a quick reflection on how they are going, and prepare them for the third and final sprint of this lesson.

**Slide 13:** In this Bonus Video! In this third (and optional!) video for Lesson Four, we share some of the great submissions from Imagine Cup Junior 2021 to inspire your class to do something great for this year’s Imagine Cup Junior!

**Slide 14-15:** Sprint Three – In the third ten-minute sprint of Lesson Four your students can again work in their teams to work on their AI concept. Encourage them to use the 123 step process!

**Slide 16:** This is a quick moment to recap what your students achieved in Lesson Four. Specifically they:

* Learned about how to be AI inventors.
* Created their AI solution.

In the next lesson, they will work to make their AI’s ‘good’!

**Slide 17:** Bonus Activity If your students want to create an OPTIONAL prototype of their concept, [Azure for Students – Free Account Credit | Microsoft Azure](https://azure.microsoft.com/en-us/free/students/) can be a platform for them to develop their concept using their favorite languages and create custom apps in Visual Studio.

**Slide 18:** 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 Four finished! As you can see, The Imagine Cup Junior for Beginners PowerPoint slide decks are 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. This lesson sees your students inventing their idea, which they will now move forward with for the final two lessons and then submit to the challenge.

In Lesson Five, the students will have some philosophical work to do as they apply an ethical lens to their idea in addition to learning about cybersecurity mitigation.