

Course Beginner: Lesson 4 Flying Helicopter

Lesson Plan

Objective:

We will make an application of a helicopter flying in the sky.

- Interpret the concrete instructional blocks used in the program to make the project
- Follow/Explain a given program used to make the project
- Identify/Write a program used to make the project
- Evaluate a program used to make the project

Materials:

- Head phones with microphone

Assessments:

A) Plugged:

Students will create application having a helicopter moving in left, right, up and down direction when specified keys are pressed on the keyboard. (Refer the Rubric to assess the Student Projects)

B) Paper Based: Paper Based: (Refer Student Companion)

Resources

- As part of getting ready for the lesson, watch the online video lesson to make this project on link below,
<https://www.youtube.com/watch?v=V7QU9kufKzg&feature=youtu.be>
Also, teachers can share the link with the students for their further reference.
- The scratch file of the ready project will help you as reference and you will need it to show it to students in the beginning of the lesson. Download the scratch file of the project from the link below,
<https://scratch.mit.edu/projects/318856283/>

Plan (40 minutes + 5 minutes buffer)

Introduce the objective. (3 minutes)

[Slide 2] Teacher will introduce the objective to the kids. Teacher could read it or read it with whole class or ask a student to read the objective on the slide. Teacher will open the Scratch file and show what the kids are supposed to make.

I do (Teacher explain and demonstrates) (7 minutes)

[Slide 3] Teacher will model by thinking aloud and then brainstorm with kids to find relevant information by asking the following questions,

Teacher will ask following questions and take responses from the kids,

1) What things we will need on the stage?

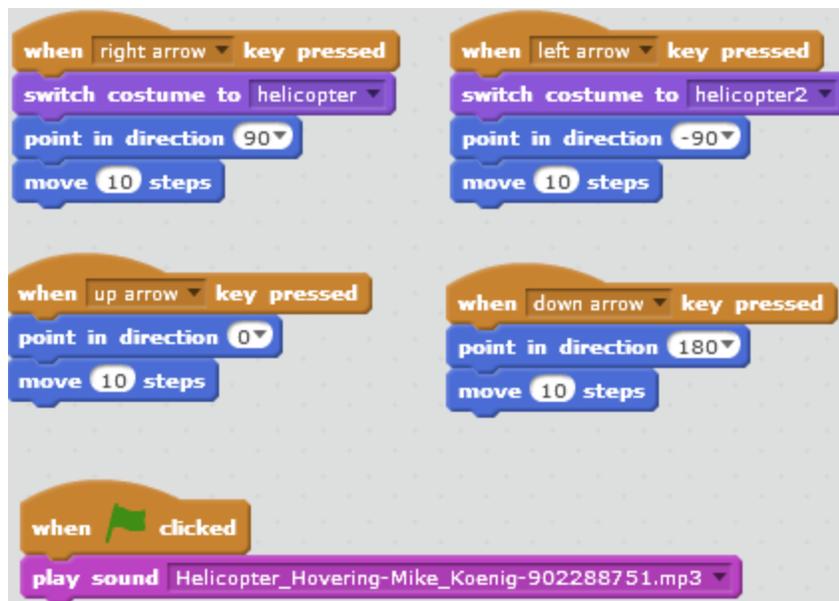
1. A sprite "Helicopter"
2. A backdrop which can help us see that helicopter is flying

2) What will happen on the stage?

Helicopter will move left, right, up and down when the arrow keys are pressed on the keyboard.

[Slide 4] Teacher will model/demonstrate the following things as shown in the video,

- Teacher will bring backdrop, sprite and record audio needed on the stage.
- Teacher will model writing following codes to make the application using blocks. Teacher will also explain the function of the block



[Slide 5] Teacher reads the definition of mirror image and explains with the example of helicopter and boy shown in the slide.

We do (Kids practice with teacher): (8 minutes)

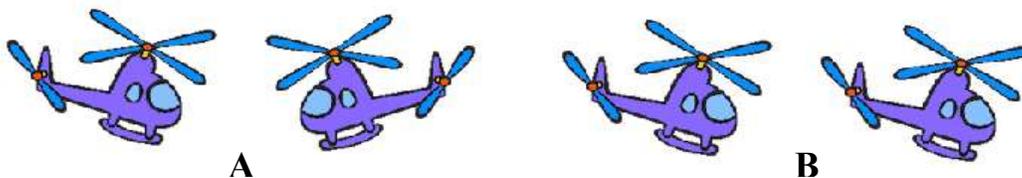
[Slide 6] Teacher asks questions to kids "What you are supposed to do?" (First, they create a backdrop, then bring the pictures of things around them as sprite and then write codes to play and say about them in form of speech bubble.)

[Note: Teacher here can keep on asking "What should I do first?" then "What should I do next?" to specific student or can ask students to tag.]

[Slide 7 and 8] Teacher takes a quiz to check for the understanding of the students.

Teacher asks students to think about the response to the question, pair with the partner and discuss the response. Teacher gives them 120 seconds. Teachers ask randomly one pair to share the response after each of the questions below,

1. Which of the following which shows the mirror image of the Helicopter?



[Correct answer is A]

2. Say Yes or No and give reason.

We want to make an application to make a helicopter fly of the stage. In the application, we want to write a program to make the helicopter move left when the left arrow key is pressed. Will the program below work?



[Response: No. Because point in direction has 90 degree i.e. right direction. Therefore, the sprite will move right when the left arrow key is pressed on the keyboard.]

You Do: (8 minutes)

[Slide 9] Teacher asks student to start their work to make the application. Teacher instructs kids that they have to make application about helicopter flying on the stage. They can also choose some other

character and backdrop to make the character move on the stage when the arrow keys are pressed. Also, they have to fill the graphic organizer first and then start working on their application.

[Note: Teacher can help kids if they are struggling at any point or may keep on asking questions like, what they are doing? Or what are they learning? Or ask Reflection Journal Questions?]

Assessment: (8 minutes)

[Slide 10] Teacher asks students to solve the assessments independently in the student companion. Teacher may explain what kids are supposed to do.

Closing (6 minutes)

[Slide 11] Teacher asks Reflection Questions and gives time to kids to write their responses. Teacher discusses the responses with kids.

1. What did we do today?
2. What is one thing that you liked the most?
3. What did you learn?

[Note: Students are also supposed to write the response to these questions in the student companion.]