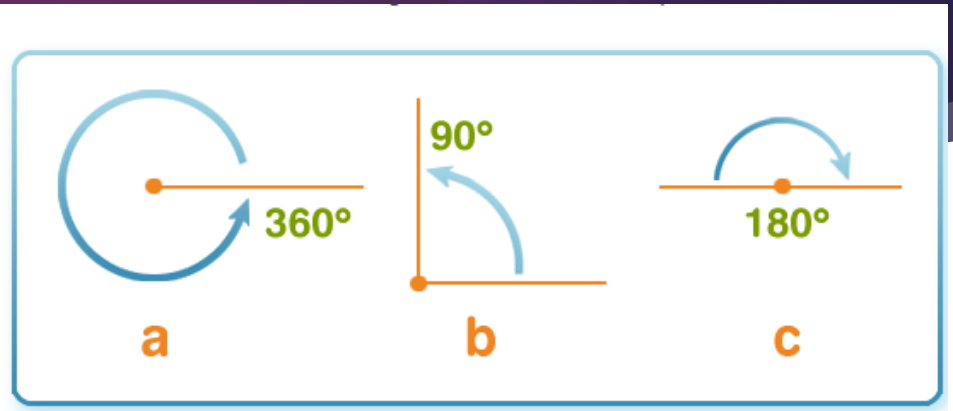
Programming using Logo

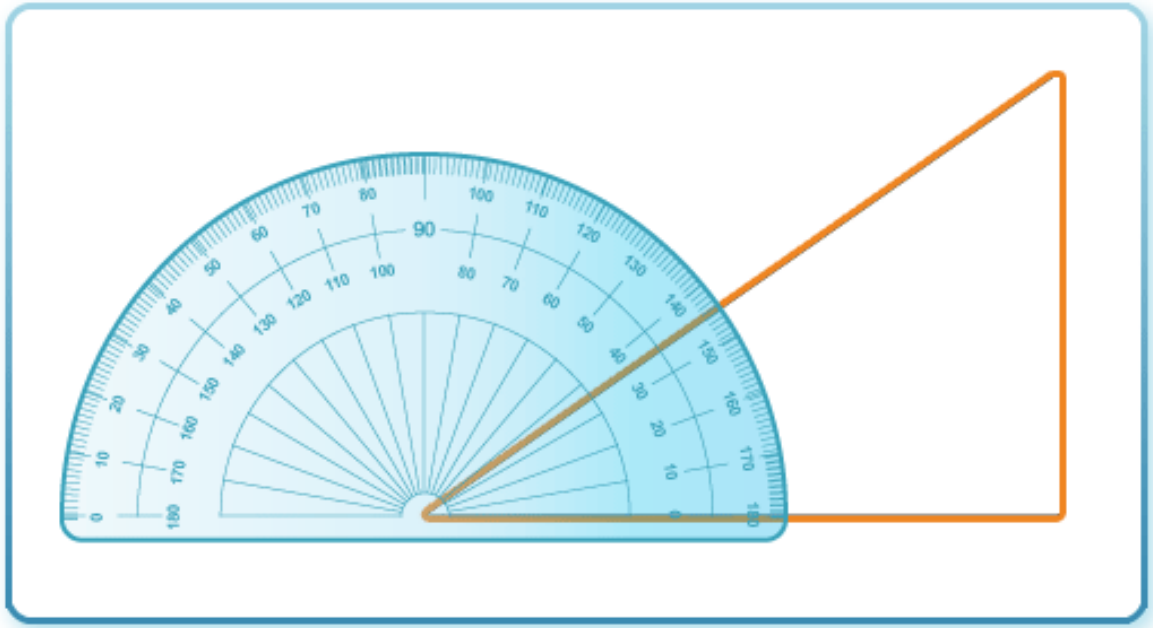
YEAR 3 & 4

Week 1

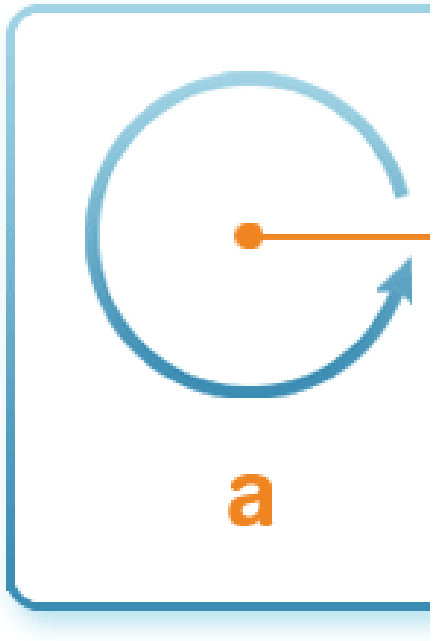
Purple Mash Logo

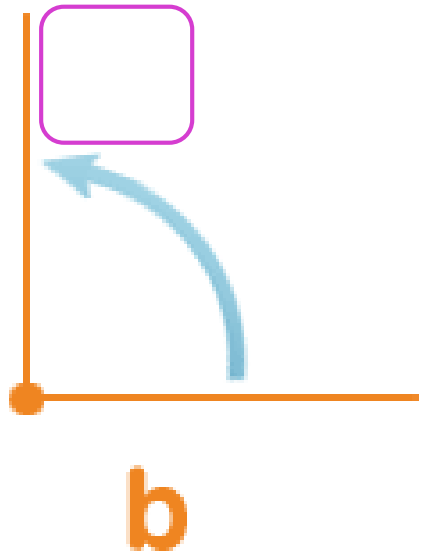
45°
90°
180°
270°
360°

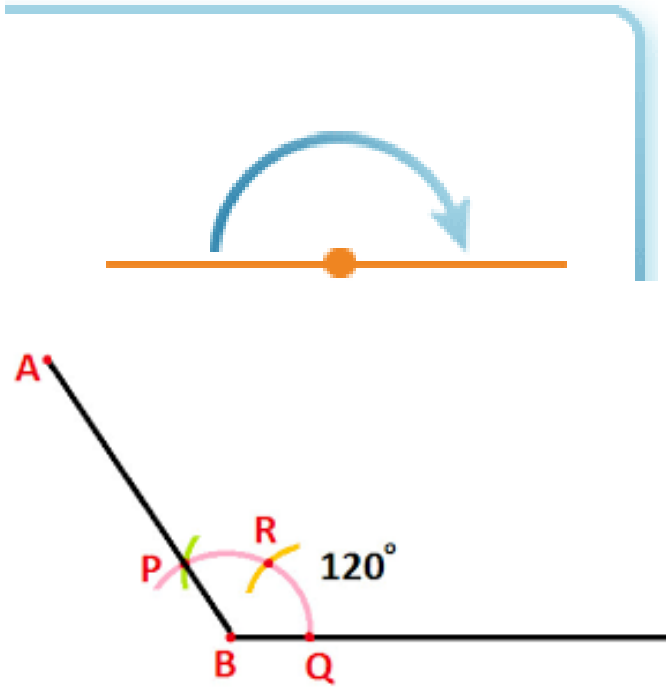




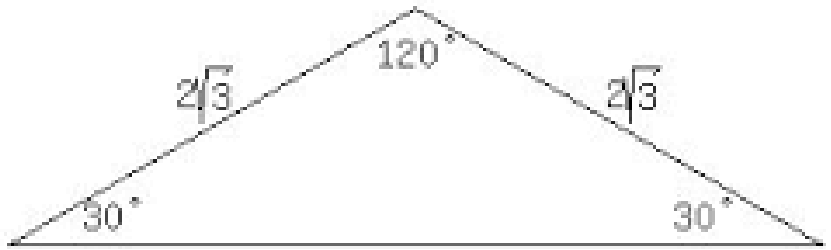
Week 1

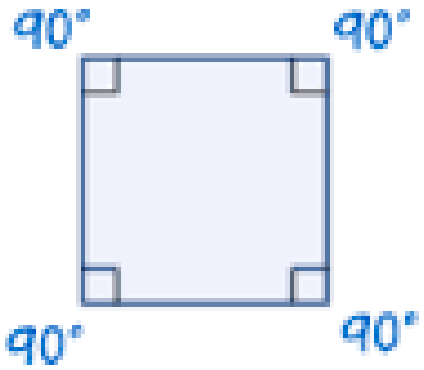






Angles – divide by number of sides 180 - 360





360
4 sides = 90
3 sides =120
5 side =72

Lesson 1

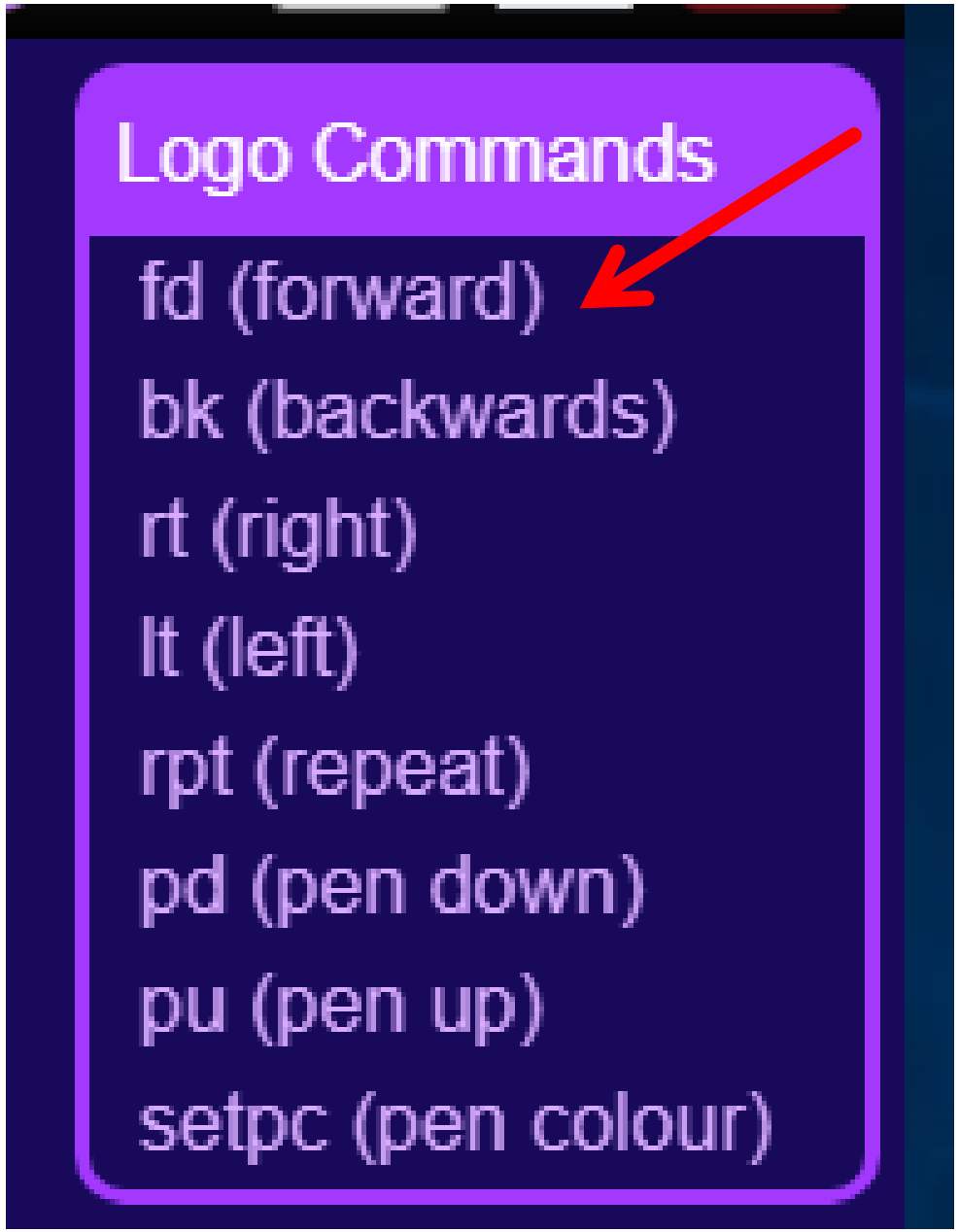
To learn the structure of the language of Logo. To input simple instructions in Logo.

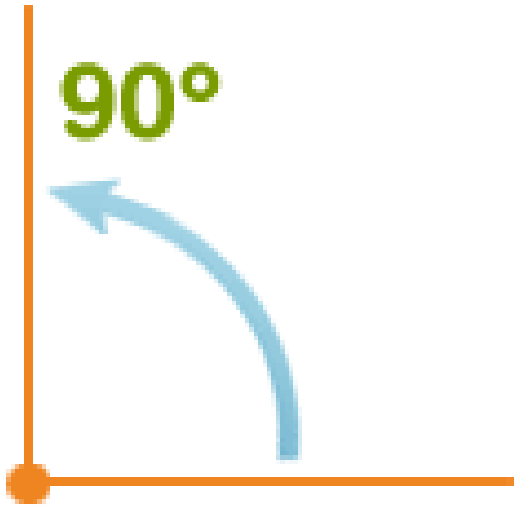
- Know what the common algorithms (instructions/commands) are in Logo and how to type them in.
- Can demo how to program Logo algorithms to make sprite move around the maze.
- Know that a turn is represented by programming in a 90° (degree) code.

Today you will move the sprite around the maze using Logo abbreviations of algorithms (instructions/code).

Week 1

- Learn common commands and constructs of the Logo programming language.
- Develop ability to compose algorithms for drawing mathematical structures and turn these into Logo code.
- Discuss what an algorithm is (instructions/ commands)
- Remind what a 90° turn is demo together
- Understand the abbreviated code FD 5 RT 90 LT 90 LT 90 FD 7
- Today's task The **Minotaur Maze**
- PLAY – RESET – CHECK – buttons work



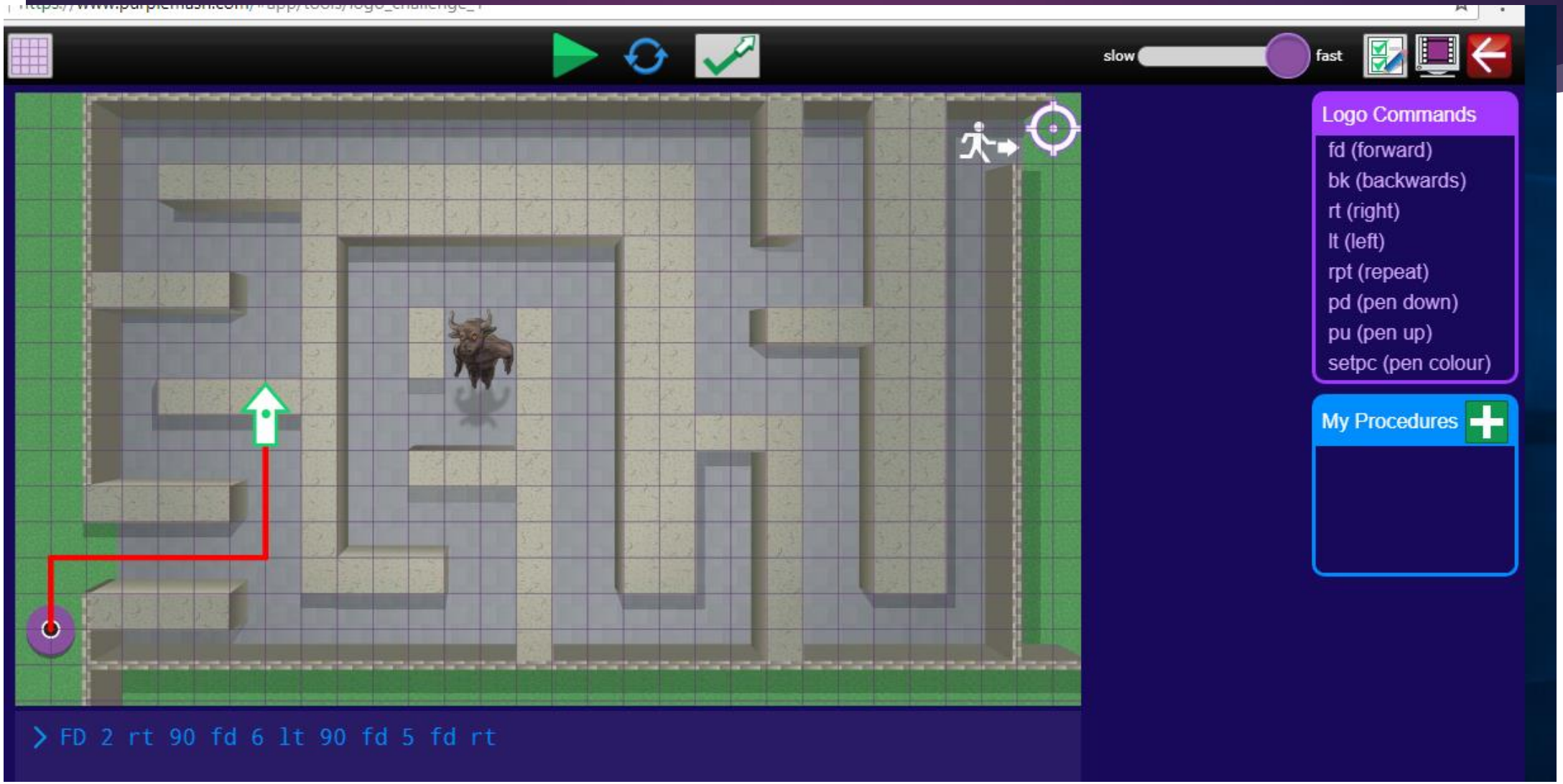


- Abbreviated algorithms – can type in or click on the code in Logo Commands box.
- Then type the number of moves or the degree turn.
- Press space in between code and numbers.

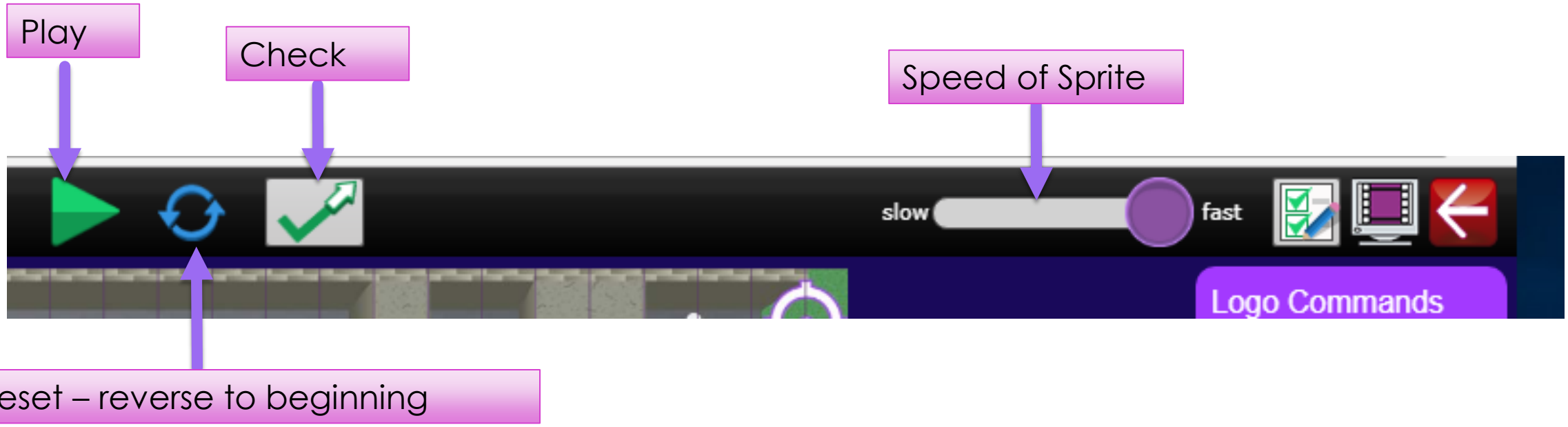
- Abbreviated algorithms – can type in or click on the code in Logo Commands box.
- Then type the number of moves or the degree turn.
- **Press space in between code and numbers.**

```
> FD 2 rt 90 fd 6 lt 90 fd 5 fd rt
```

Week 1 - The Minotaur Maze



Week 1


Play
Check
Speed of Sprite
slow
fast
Logo Commands
Reset – reverse to beginning

Code in logo

- FD 5
- RT 90
- LT 90
- FD 5 RT 90 FD 6 LT 90 FD 7 LT 90

Week 2

- Can follow Logo code to predict the outcome.
- Can create shapes using the Repeat function.
- Can find the most efficient way to draw shapes.

Week 2

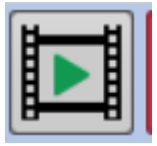
- I can…..Confidently define what an algorithm is
- I can….Successfully input the correct command to move the sprite in the precise direction
- I can effectively predict the correct outcome of the commands I have generated
- I can…efficiently use the repeat function key to navigate the sprite
- Re-cap what a 90° turn is demo together
- Enforce that a turn is represented by programming in a 90° (degree) code.
- Recap the abbreviated code FD 5 RT 90 LT 90
- Pen up/down abbreviation
- Introduce today's task The Dream Time

Week 2 - Coding

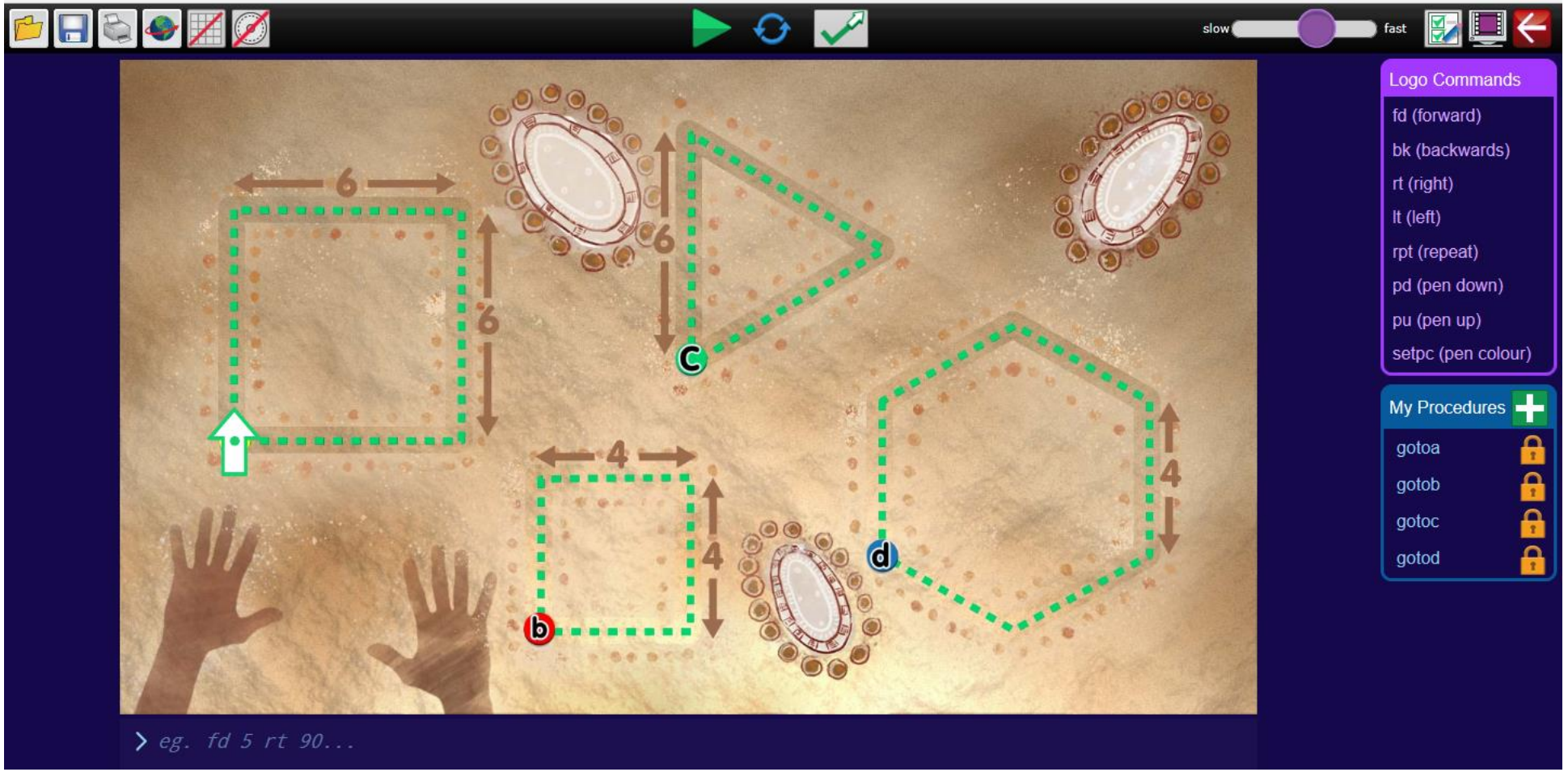
- Go to command
- Pen down
- Pen up
- Colour of pen

- Be able to demo how to type in fd for forward movement
- Be able to type in the correct ° for an angle turn

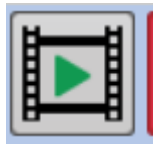
Lesson 2

- Using 2Logo to create shapes.
- Can create Logo instructions to draw patterns of increasing complexity.
- Understand the pu (pen up) and pd (pen down) commands.
- This week's task is set as a to do in Purple Mash the name of the task is The Dream time.
- Watch the video before you begin it will help you to understand the task. Click on the video icon top right hand corner 

Week 2 - Dream time



Week 3 - Coding

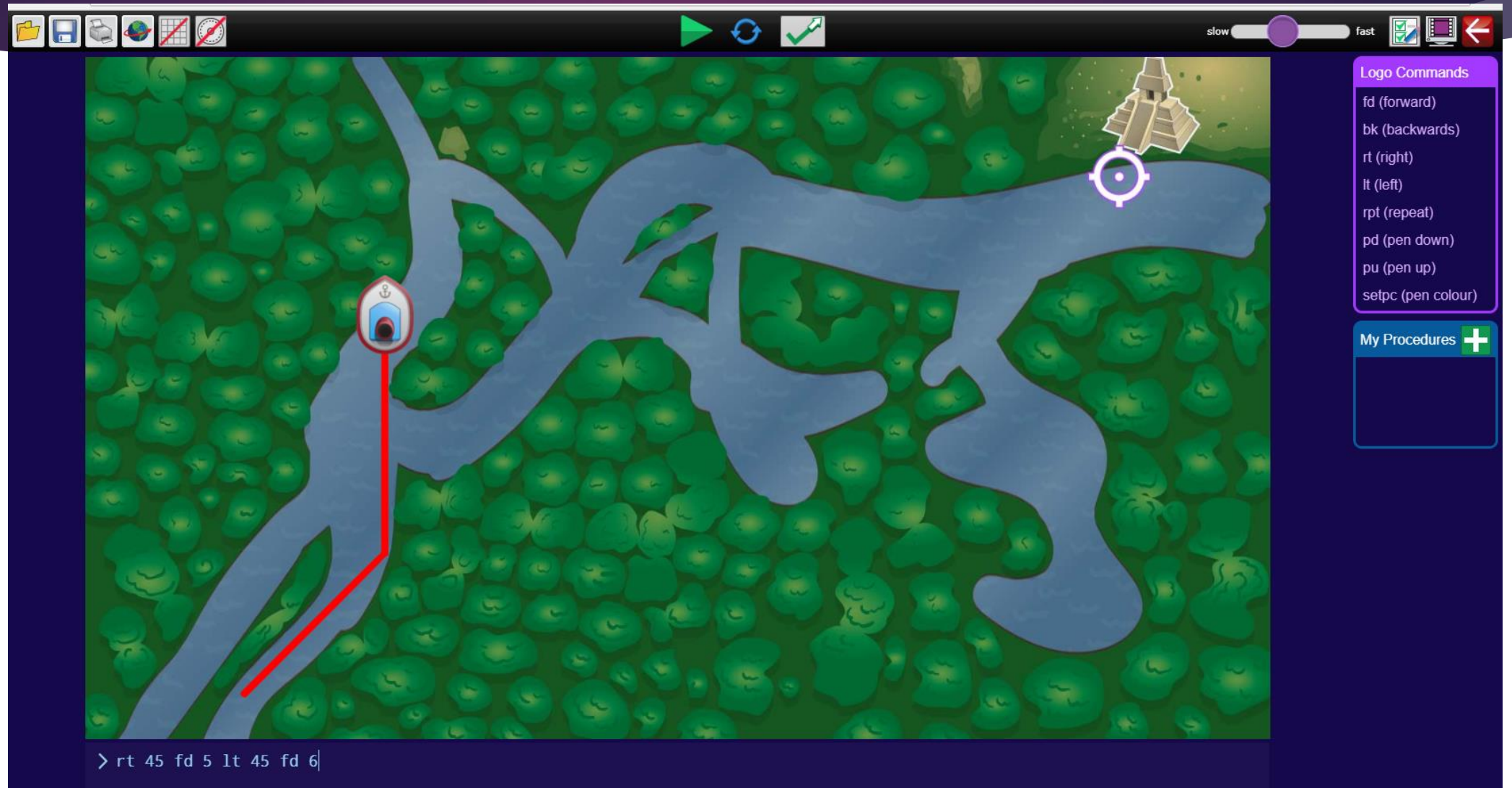
- Enforce that a turn is represented by programming in a 90 ° (degree) and 45 ° (degree) code.
- Introduce today's task River Rapids
- Watch the video before you begin it will help you to understand the task. Click on the video icon top right hand corner 

Week 3 - Coding

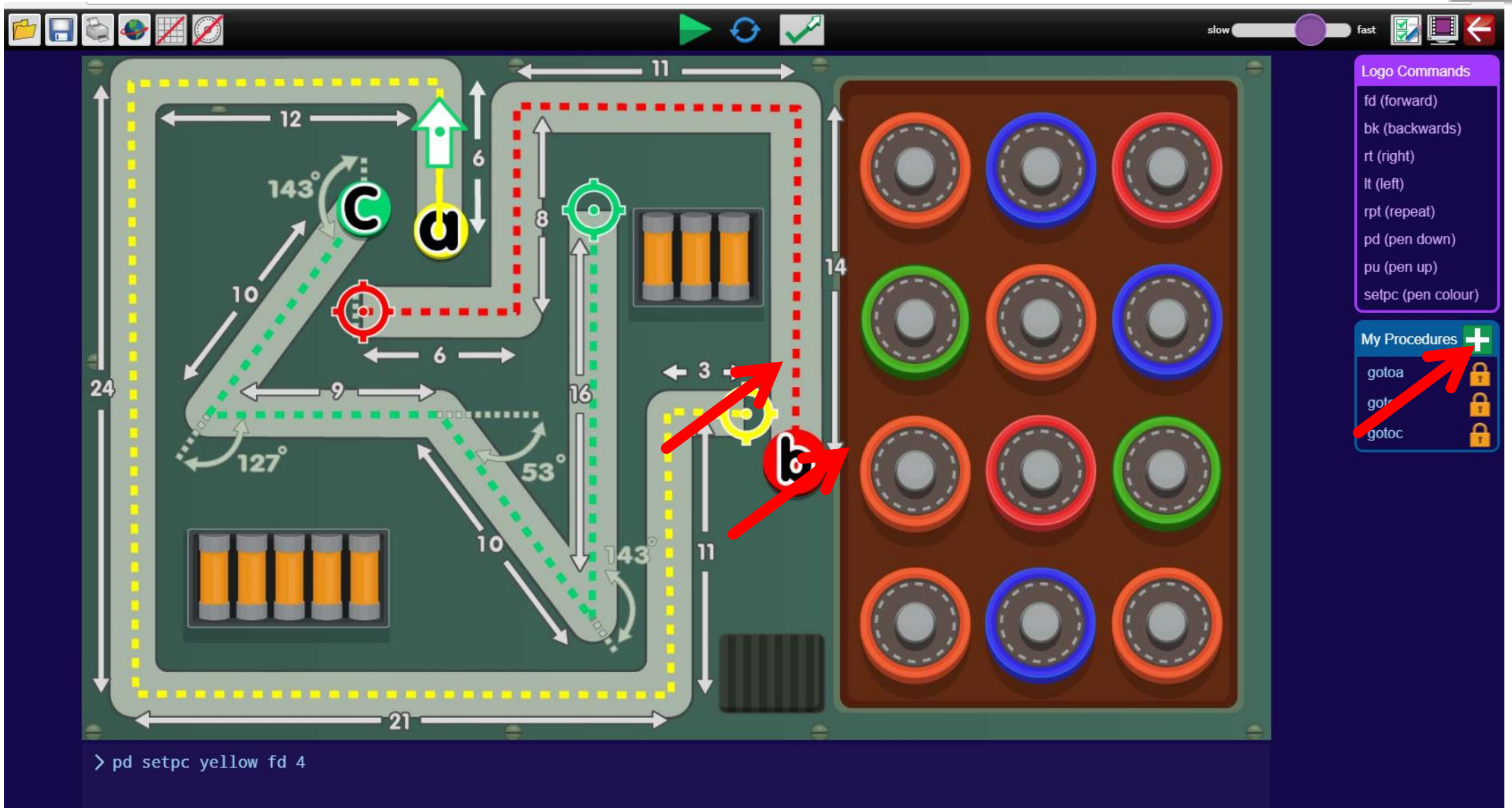
- Go to command
- Pen down
- Pen up
- Colour of pen

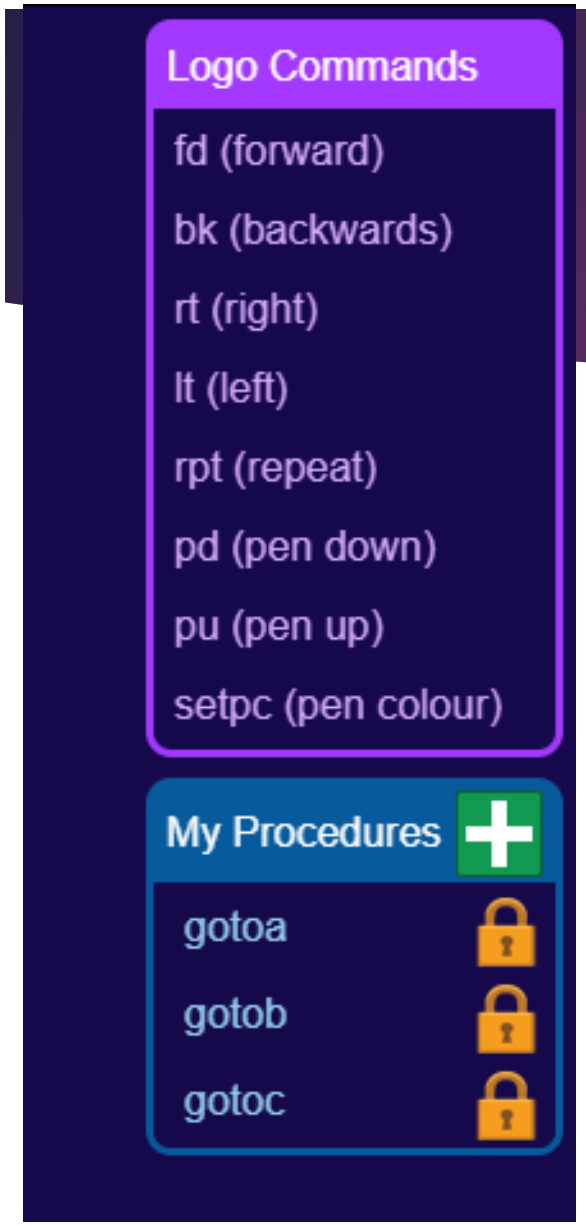
- Be able to demo how to type in fd for forward movement
- Be able to type in the correct 90° or 45° for an angle turn
- Be able to click on the correct go to procedure

Week 3 – Coding River Rapids

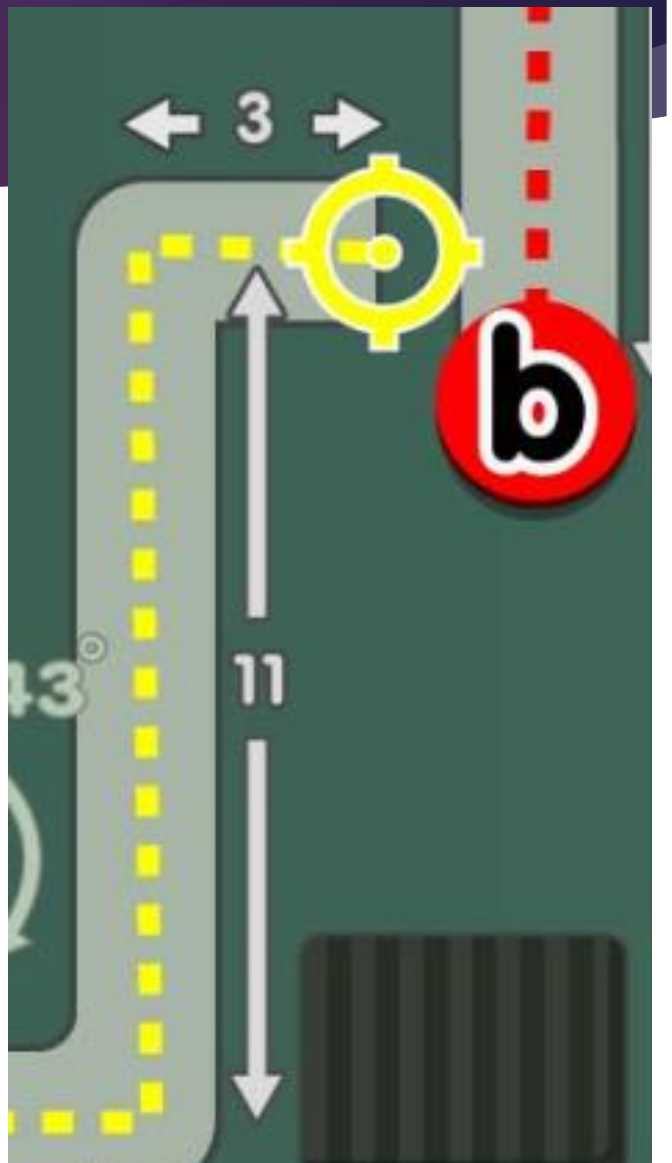


The Turning Test Task

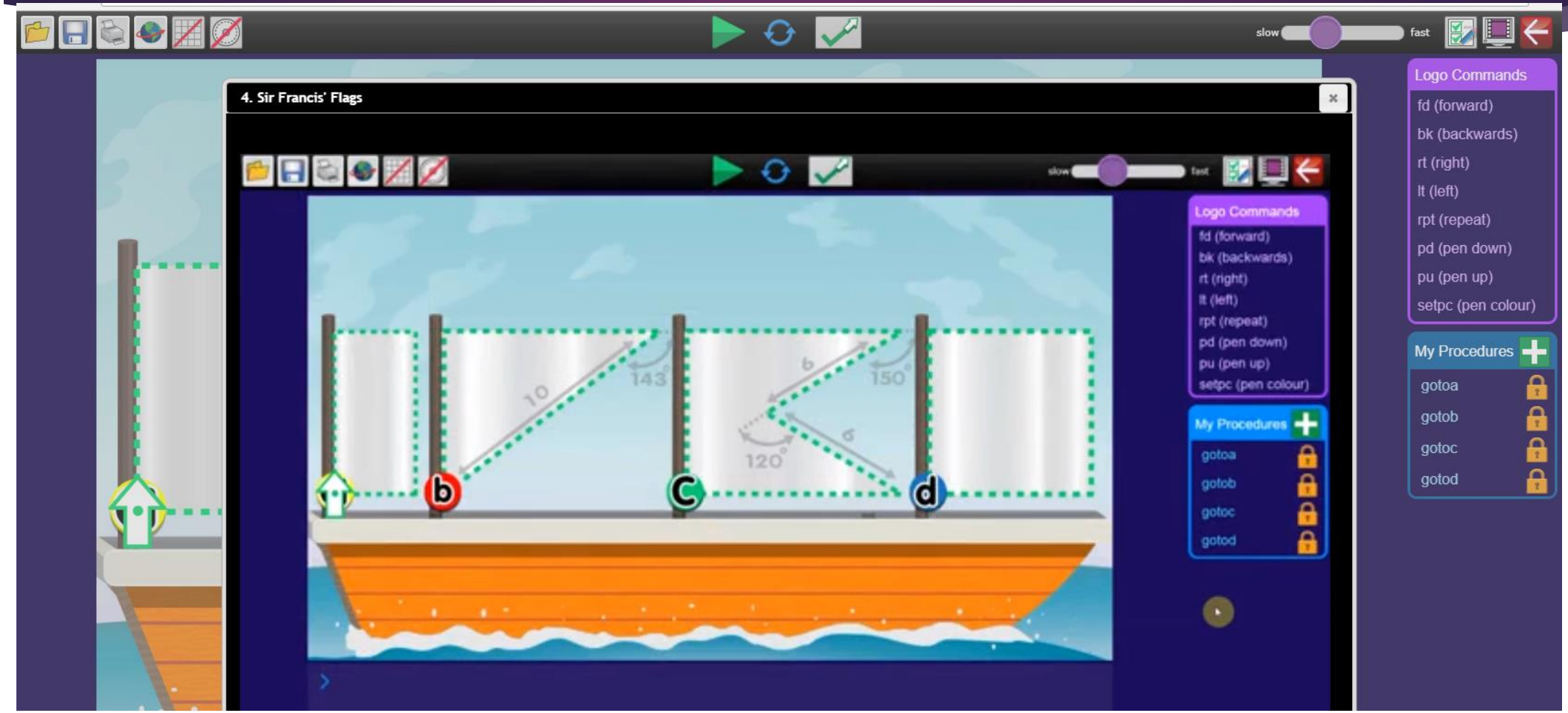




- Jump from course A when it ends to the start of course B
- By using the **gotob** code in MY PROCEDURES



Flags: Starting a point a plot your algorithms to point d



Protect the planets