




10 minute timer

## Activity 1

# Play on Scratch's Web site!

- Go to <http://scratch.mit.edu>
- Try out some of the "projects"!
- Drawing:
  - <http://info.scratch.mit.edu/node/183/5>
- Story:
  - <http://info.scratch.mit.edu/node/120/2>
- Game:
  - <http://scratch.mit.edu/projects/08jackt/1087964>

Mr James

You're going to be creating cool animations and games using Scratch.


The best way to find out what it does is to visit the Scratch web site and to play on some of the projects that have been submitted.

Go to <http://scratch.mit.edu>. Use the countdown timer so we don't stay on the site all lesson!


Use ABTutor or similar to share good projects with the class- get some students to briefly share what they find out from the projects.

2 minutes


# Objectives



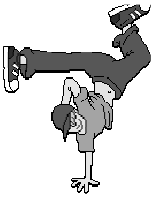

- Select control blocks to create animations



- Experiment by modifying "blocks"
- Use blocks appropriately



- Create your own sequence of instructions
- Use blocks efficiently



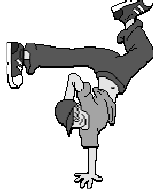

Mr James

These objectives relate to the 'project diary' that students will write – this comes up at the end of the lesson.

30 seconds!

# Today...

- 1) Play on the Scratch web site
- 2) Learn about the unit
- 3) The Human Robot Game!
- 4) Organise a folder for our files
- 5) Create animations
- 6) Complete project diary



Mr James

Today's activities

## Activity 2

### PLAN OF ACTION!

30 seconds!

- LISTEN!
  - Use Scratch to make games & animations
  - Computer at home? = download it!
  - Too Easy? = you'll be doing
  - First 3 lessons = following
  - Last 3 lessons = create your
  - Best projects =


FUN!

FLASH

tutorials

OWN Project!

Prizes!!



Mr James

This is just a brief introduction to Scratch.

First 3 lessons = learn through using tutorials

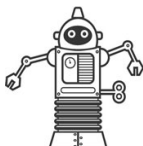
Last 3 lessons = students create their own project.

Give prizes for the best project at the end of the unit.

## Activity 3

5 minutes

# The Robot Game



**ROBOT INSTRUCTIONS**

The robot **ONLY** understands these commands:


FORWARD *x* paces

BACKWARD *x* paces

TURN left/right (or half-left/half-right)

**(where *x* is a number)**

e.g. FORWARD 4 paces



Mr James

Optional game – keep it quick as it doesn't involve all students. You could do this at the end of the lesson instead. Choose a student who doesn't like to sit still to be the robot!

### SCRIPT:

To make a computer program, you need to understand how computers follow instructions...which lead to something useful, i.e. a 'goal'... press LEFT, player goes left etc.

I need a willing volunteer... to be blindfolded! This person is "the robot". Robots can't think for themselves, they can only follow instructions.

Now, I need someone to secretly position an object (e.g. toy or confectionary treat) on the floor in the room, but don't make it too difficult or dangerous.


Now, another volunteer. **ONLY** use the given commands to guide the robot to the object, as efficiently as possible!



This is exactly what a computer does all day long – respond to instructions. You're going to be writing instructions to create animations, but first...

7 minutes

## Activity 4

1. Log on to your computer
2. Go into your HOME area
3. Create a folder in your home area called 'control'
4. Go into the shared area
5. Copy the worksheet and shortcuts folders from the shared area to control folder in your home area
6. When finished, **help someone else AND check they've done it correctly.**
7. Open and complete 'coordinates.doc' activity whilst waiting... there might be a prize for the first person to put their hand up once they've completed it!



You ONLY need to copy these TWO folders to your home area!

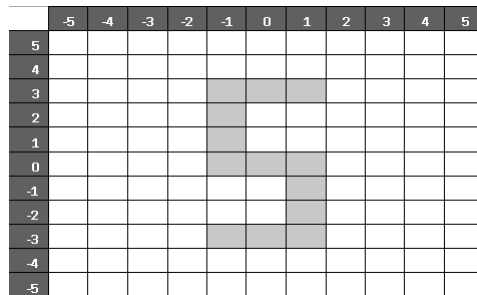
Mr James

Students should create a folder called 'control' in their home area – this might be a subfolder under an existing folder for ICT.

Make sure each student has done this correctly so everyone's files remain organised.

# Coordinates

■ Answer:




(1,3), (0,3), (-1,3), (-1,2),  
 (-1,1), (-1,0), (0,0), (1,0),  
 (1,-1), (1,-2), (1,-3), (0,-  
 3), (-1,-3)



Mr James

This is the solution to the coordinates activity – not many students are likely to attempt this. Don't spend long on this task, as there are plenty of more opportunities for learning about coordinates later on. Read out ONE of the coordinates and get a student to point to the corresponding cell. Emphasise that you can control the position of items on the screen by using two numbers –one for the horizontal position, and one for the vertical position.






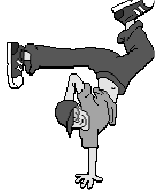

## Activity 5

# Animation tutorials

25 minutes

- Use tutorials in the shared area to...
  - Create a funky coloured butterfly
  - Create a break dancer
- ADAPT each sequence
- CREATE your own sequence
  - There isn't a 'right' or 'wrong' way of completing a task in Scratch
  - Some solutions are more efficient than others.
  - It might seem like a lot to take in...
    - but as you begin to understand what they do, it all becomes a lot easier!



Mr James

Students should work through the tutorials quickly, and use the suggestions at the bottom to 'play around' and adapt the sequences. Encourage students to 'click everywhere' in Scratch to help them learn about what everything does.

**With 5 minutes to go, make sure students save their work into their HOME area!!**

6 minutes

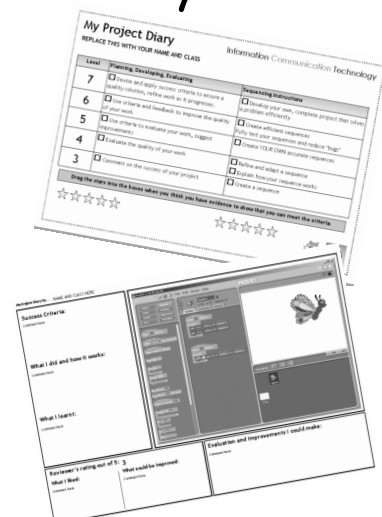
## Activity 6

# Update project diary


- Update your project diary
- Finish this task at home for an extra reward!

- **BONUS TASK**
  - Complete worksheet: 'definitions1.doc'
- **WANT MORE?**
  - Use the reference guides and 'scratch cards' in the shared area to help



Mr James



Introduce the project diary.

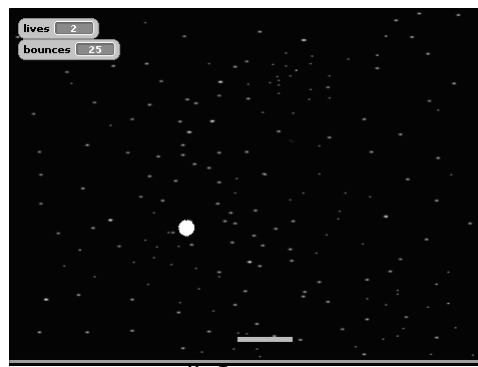
On the front page, students can drag stars next to the criteria they think they have met today (show the objectives again if needs be).

They should take screen print(s) of their work, crop them and place them on to the project diary page.

Make sure they're filling it out correctly.

## Next Lesson...

- Making games!



Next lesson teaser...