

PRIMARY STEM PROJECT

UNIT 6



LET'S RACE

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UNIT 6:

LET'S RACE

In this unit pupils will showcase what they have learned over the project by working as a team. Presenting their idea and speaking about their experience. Pupils will compete in teams, challenging their peer at a fun and exciting race day.

LEARNING OUTCOMES

Pupils will aim to

- Work successfully as a team.
- Present their ideas to the teacher, class or wider audience.

Most pupils will be able to

- Take on a role within a team and carry out tasks independently.
- Present their ideas in a clear and logical way.
- Talk about what they have learned
- Recognise new vocabulary be able to use it appropriately.

Some pupils will be able to

- Take on a leading role within a team demonstrating organization and people management skills.
- Present their ideas in a dynamic and attractive way.
- Confidently talk about what they have learned using newly acquired vocabulary.

Pupil differentiation

Learning differentiation will occur as each team work within their own limits to produce their best work.

TEACHERS' NOTES

TEACHERS NOTES UNIT 6

LESSON 1

PORTFOLIOS & PRESENTATIONS

LEARNING OBJECTIVES Pupils will: <ul style="list-style-type: none">• Work as a team.• Produce a display of work.• Improve presentation skills• Develop in confidence	INDIVIDUALS PAIRS GROUP
RESOURCES WORKSHEETS BUILDING A PORTFOLIO PIT DISPLAY GUIDANCE VERBAL PRESENTATION GUIDE POWERPOINT PRESENTATION & DISPLAY	EQUIPMENT <ul style="list-style-type: none">• Writing Equipment
RELATED WORKSHEETS RULES & REGULATIONS	
IN PREPARATION Talk about display in the class room and prepare some examples of effective displays. Talk about what makes them stand out and how pupils can include these ideas in their own work.	
STEPS <ul style="list-style-type: none">• Building a Portfolio: Pupils will require time to prepare and present their work. Please emphasise the importance of neatness. Use the PowerPoint PRESENTATION & DISPLAY to cover tips and ideas on presentation.• On race day, each team should prepare the following:<ol style="list-style-type: none">1. A Portfolio of work containing design developments, test chassis and development of bodyshell and all research.2. A Verbal Presentation to other members of the class/school/staff/parents.3. A Table Top display of all that they have learned over the project. This could include posters, the team's portfolio, photographs, examples of team logo and team uniform etc. <p>Guidelines for pupils are included on BUILDING A PORTFOLIO, PIT DISPLAY, GUIDANCE, VERBAL PRESENTATION GUIDE</p> <ul style="list-style-type: none">• If you are to run the race as a judged competition, it is useful to allow the pupils to see a copy of the RULES & REGULATIONS, which includes the marking scheme.	
PLENARY Discuss how the set-up of display has gone and recap on all rules and regulations. Allow time to make adjustments to displays of work, if necessary	

TEACHERS NOTES UNIT 6

LESSON 2 RACE DAY

LEARNING OBJECTIVES Pupils will: <ul style="list-style-type: none">• Learn the importance of carefully planning and thorough preparation.• Showcase their work to a wider audience.	INDIVIDUALS PAIRS GROUP
EQUIPMENT *Roll out mat *Launch System *Finish line recording equipment *Additional Challenge materials Certificate, Awards or Prizes	
IN PREPARATION In preparation for race day you will need to create a timetable for the day. Each team should have a set time to race and perform their verbal presentation if appropriate. Helpers and judges will also need a timetable to make sure that everybody is where they should be, when they should be.	
STEPS <ul style="list-style-type: none">• Race Day can be run in two different ways: It can be used as a fun conclusion to an exciting project and can be run as a competition, with pupils competing against their fellow classmates. Or, you may wish to run this as a challenge against individual teams, other classes or schools involved in teaching the project. A full set of suggested RULES & REGULATIONS are available online, along with suggestions on how to run the day.• You will need: The Race System (Track & Launch System) Additional adult support to help with running the track and judging (suggested judging criteria is included in RULES & REGULATIONS). You may wish to consider using a video recorder or a simple mobile phone to record the finish line. Some races may need a photo finish. A chart, whiteboard or digital screen to record results.• Teams should be drawn out of a hat to decide their place on the Race Day Knock-out Table. They should race in pairs with the fastest car going through to the next round. If you have an odd number of teams the final team drawn should be given a bye through to the next round.• The draw could be done in class to build excitement. If the finals are to be raced in front of the whole school, the draw could be made in assembly.• If you are to run the race day as an event. It is a good idea to have an additional challenge task to keep teams busy whilst the racing is taking place. Please see UNIT 6 LESSON 3- ADDITIONAL CHALLENGE. AWARDS	

- An Awards Ceremony can be a nice way to finish off race day. Consider offering a small prize or trophy to the **overall winning team**. Smaller prizes can be awarded to recognise other areas of achievement.

Suggested Awards:

Best Verbal Presentation

Best Portfolio

Best Uniform Design

Best Teamwork

Best Table top Display

Best looking Car

Best Engineered Car

Fastest Car



LESSON 3 ADITIONAL CHALLENGE

LEARNING OBJECTIVES Pupils will: <ul style="list-style-type: none">• Be tasked to work cohesively as a team.• Work under time restrictions, sharing tasks between team members.	GROUP
RESOURCES WORKSHEETS ADDITIONAL CHALLENGE - Carnival ADDITIONAL CHALLENGE -Recycled Materials ADDITIONAL CHALLENGE- Using IsoSketch ADDITIONAL CHALLENGE - Ideas	EQUIPMENT *Writing Tools *Drawing Tools *Glue *Scissors *Glue gun
* IN PREPARATION Teachers should read through Additional Challenge ideas and carefully choose one to use. It may be that additional information or materials need to be prepared prior to the event.	
<ul style="list-style-type: none">• The idea of the additional challenge is to give pupils something to do whilst other teams are racing. This should be something that will consolidate learning from the project and involve teamwork. It should be something fun, where they can use their imaginations. Some ideas for additional challenges: make a recycled rubbish car, make a poster to advertise an event, design a fantasy car based around a theme.• Guidelines and resources to support these and other challenges are included in the online bank of projects in the folder RACE DAY under the heading Additional Challenge Ideas	
PLENARY The additional Challenge could be assessed on the day with points added to their overall score. This work could then be put up as a classroom display and reviewed as a class after the race day event.	

TEACHERS NOTES UNIT 6

LESSON 4 EVALUATION

LEARNING OBJECTIVES Pupils will: <ul style="list-style-type: none">• Be able to reflect upon the project and recognise what has been learned	INDIVIDUALS PAIRS GROUP
RESOURCES WORKSHEETS PROJECT EVALUATION	EQUIPMENT *Writing Equipment
IN PREPARATION Prepare a PowerPoint or slide show of photographs and videos of the race day. This will help to recap on the days events and showcase the work. Include an individual picture of each car and each table-top display, alongside a team picture. <i>*Ensure that the guardian's permission is gained prior to photographs/videos being taken.</i>	
STEPS <ul style="list-style-type: none">• Complete the PROJECT EVALUATION WORKSHEET	
PLENARY A de-brief This should be carried out as soon as possible after Race Day. It could be included as part of the day's plenary. As part of the evaluation process, pupils could write an article for a newspaper reporting on the day. A display work and cars will provide positive feedback and promote the activity within the school.	
ENRICHMENT More able pupils could be a 'Buddy' and help other pupils to complete the project evaluation.	