



10 Debate: 'introduced dung beetles are good for Queensland's environment'

Place and Space

5.5 Students evaluate ideas concerning sustainability to identify who may benefit and who may be disadvantaged from changes to an Australian industry.

Systems, Resources and Power

3.3 Students apply the principles of democratic decision making in cooperative projects.

5.3 Students use a structured decision making process to suggest participatory action regarding a significant current environmental, business, political or legal issue.

There are quite a few interesting sites that are fun to use and provide information about dung beetles. (See Other support information and references, p. 11.)

Such a debate also could be staged at a community meeting.

Focus

Investigating, understanding, communicating

Aim

Students debate whether the introduction of dung beetles into Queensland has had a positive effect on our environment.

Materials

- Internet access
- Resource sheet 8—*Conducting a debate*

Sequence | 40 minutes x 3

1. Conduct this activity over a series of lessons to allow students to research their topic and prepare their arguments. Ideally, in the first session you would discuss how to conduct a debate, in the second session students would conduct their research, and in the third session the debate would be held.
2. Ask students to break into groups of nine. Each group should then break into three groups of three—one will be 'for' introduced dung beetles and the other will be 'against'. The three people remaining will be allocated the role of adjudicator, chairperson or timekeeper. If there are too many students, some could be researchers and then, later, the audience. Regardless of their specific role, all students should be involved in some aspect of the research.
3. Using the available research material, students should think of all the arguments for, or against, the statement: introduced dung beetles are good for Queensland's environment.

Note: In the case of secondary students, the results from their research and the debate could be compiled into a report that would highlight their research skills, methods of argument, referencing skills, etc.

Systems, Resources and Power

- 3.3 Students apply the principles of democratic decision making in cooperative projects
- 5.3 Students use a structured decision making process to suggest participatory action regarding a significant current environmental, business, political or legal issue.

11 Local area study

Focus

Understanding, making decisions, communicating

Aim

Help students to plan:

- an investigation of land degradation in their local area (or an area they are familiar with)
- how the *Dungbusters!* program could be of use in tackling local land degradation issues
- programs which are based on valid decision making and sound management.

Materials

Resource sheet 9—*Developing a project plan*

Sequence | 40 minutes x 2

1. Working in small groups, students identify the relationship between dung, dung beetles (or other natural resource management issue) and environmental issues in their local area (or an area they're familiar with).
2. Students follow the steps outlined in the project plan (see resource sheet 9—*Developing a project plan*) to develop strategies to overcome the problem. Students should use their research from previous activities to ensure they have a balanced perspective of the social, economic and environmental factors in their solution.
3. At each stage of the problem-solving process students record their ideas under the headings given in the model. In a short oral presentation they then outline their problem and its proposed solution to the rest of the class.

Science and Society

4.3 Students present analyses of the short and long-term effects of some of the ways in which science is used.

6.3 Students use scientific concepts to evaluate the costs and benefits of applications of science

Systems, Resources and Power

3.3 Students apply the principles of democratic decision making in cooperative projects

5.3 Students use a structured decision making process to suggest participatory action regarding a significant current environmental, business, political or legal issue.

12 Where to from here?

Focus

Communicating, evaluating

Aim

Students are to use the information they have gathered throughout the *Dungbusters!* module to report back to their local community or case study area, for example, to a local landholder or landcare group. (This may encourage the establishment of a *Dungbusters!* program in their community.) They are also encouraged to reflect on the program and the information they have found.

Sequence

1. Ask students to reflect on the information gathered during the investigating phase to identify what their results mean for a property management plan. (See resource sheet 10—*Property planning*.)
2. To generate initial discussion, ask students to identify ways in which dung beetles can be of help to landholders and what benefits they can bring to a cattle property.
3. Students should find out whether local landholders and/or landcare groups were involved in the Queensland Dung Beetle Project in their local area. (This information is available from their local Department of Primary Industries office or landcare representative.) If students find out that landholders and/or landcare groups in their local area have been involved, they could organise to visit them and report back to the rest of the class on what they have learnt.
4. Students could survey local landholders to see how effective they believe the introduction of dung beetles on their property has been in controlling fly pests, preventing environmental problems and reducing costs. They should also ask about the associated social and economic impacts—both good and bad.
5. Students should evaluate their own actions when the program is underway in the community. They could survey local landholders or hold a forum at which community members are invited to express their views about the effectiveness of the program.
6. Students could also write accounts of what they have learnt from the *Dungbusters!* module and communicate these through local newsletters (e.g. school, P&C, local landcare group, local newspaper).