**Respectful Relationships: Problem-solving**

# K:\Shared\F-10\Specialist Area - FOR PUBLICATION\Image Abstracts for Units of Work\Health and Respectful Relationships.jpgLevel 3-4

# Topic: Problem-solving

# Level 3-4

# Victorian Curriculum F–10

## Critical and Creative Thinking

### Content Descriptions

Investigate a range of problem-solving strategies, including brainstorming, identifying, comparing and selecting options, and developing and testing hypotheses [(VCCCTM020)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTM020)

### Achievement Standards (extract only)

By the end of Level 4, students … select and apply a range of problem-solving strategies.

# Teaching and learning activities

The Department of Education and Training have developed [*Level 3-4 Resilience, Rights and Respectful Relationships*](http://fuse.education.vic.gov.au/Resource/LandingPage?ObjectId=7327c6bf-696a-41c4-8fc3-3c45dccdc8bd&SearchScope=All) teaching and learning materials. The following teaching and learning activities are designed to teach the knowledge, skills and understandings relating to problem-solving for Level 3-4. The following activities are located on pages 25 to 34.

Activity 1: The knots problem-solving game

Activity 2: Roads and roundabouts problem-solving model

Activity 3: Problem-solving in peer situations

Activity 4: Evaluating problem-solving strategies

# Assessment ideas

## Pre-assessment

### A reflective T-chart

Ask students to record what they know about problem-solving in the first column of a reflective T-chart.

|  |  |
| --- | --- |
| What I know about problem-solving | Now I know that … |
|  |  |

Use this task to reflect on students’ understanding about problem-solving strategies.

Tell students that they will complete the second column of the T-chart ‘Now I know that …’ after undertaking a number of activities about problem-solving strategies.

## Summative assessment

### Responding to a letter from a friend

Provide students with a ‘letter from a friend’, which describes a problem. As an alternative use the problem-solving scenarios from Activity 3: Problem-solving in peer situations. Ask students to use the problem roundabout diagram from Activity 3 to identify possible actions (destinations) they could recommend to their friend to help solve the problem. For each action (destination) students should record the positives and negatives. Ask students to write a response to their friend explaining their options and recommending the option they think is best.

As an extension students could be provided with a more complex problem with multiple dimensions. Encourage students to break the problem down into smaller parts and develop strategies to address each part. Ask students to reflect on what criteria they would use to evaluate which problem-solving options would produce the best result.

### A reflective T-chart

Revisit the reflective T-chart with students, by asking them to record ‘Now I know that …’ in the second column of a reflective T-chart.

|  |  |
| --- | --- |
| What I know about problem-solving | Now I know that … |
|  |  |

Use this task to assess students learning about problem-solving.

Refer to the Assessment Rubric to identify where students are located on the Victorian Curriculum F–10 continuum.

# Problem-solving assessment rubric– Level 3-4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Relevant element of the Achievement Standards** | | | | |
|  | **Level 2** |  | **Level 4** |  | **Level 6** |
|  | **Critical and Creative Thinking** | | | | |
|  | **By the end of Level 2, students …** demonstrate and articulate some problem-solving approaches. |  | **By the end of Level 4, students …** select and apply a range of problem-solving strategies. |  | **By the end of Level 6**,students disaggregate ideas and problems into smaller elements or ideas, develop criteria to assess and test thinking, and identify and seek out new relevant information as required. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Assessment Rubric** | | | | |
| **Category** | **At Level 2 students can:** | **When progressing towards Level 4 students can:** | **At Level 4 students can**: | **When progressing towards Level 6 students can:** | **At Level 6 students can:** |
| Problem-solving approaches | * identify multiple approaches to solving a problem | * describe different approaches to solving a problem and suggest which approach would be better to use | * suggest a range of strategies to solve a problem and select one that they think is most appropriate to the situation | * explain and justify different strategies to solve a problem | * break a problem into smaller parts as a problem solving strategy * use criteria to assess the appropriateness of different strategies that could be used to solve a problem |