



EduTrend Contents

P4C · LOGIC AND CRITICAL THINKING · MIDDLE SCHOOL

Valid or True?

Can an argument be logical but still have a false conclusion?

Ages 11–13

Level: Intermediate

50 minutes

Circle and small groups
· up to 30

Activity 03

Inside: activity at a glance · step-by-step session plan · facilitator notes · 3 student worksheets · assessment checklist

ACTIVITY 03 · AT A GLANCE

Valid or True?

Students look at short arguments: all cats can bark; Tom is a cat; so Tom can bark. They notice the reasoning works but the first premise is false. They sort arguments into four boxes: valid with true premises, valid with false premises, invalid with true premises and invalid with false ones. The enquiry explores why good reasoning needs both good logic and true starting points.

Learning outcomes

By the end of the session students can:

- identify premises and conclusions;
- distinguish validity and truth;
- classify arguments;
- evaluate everyday reasoning.

KEY WORDS

premise · conclusion · valid · invalid
· true · false

CURRICULUM LINKS

Maths: logic. English: argument writing. Computing: Boolean logic.

1

STIMULUS

Share something to think about

2

THINK

Quiet thinking time

3

QUESTION

Create and choose a question

4

ENQUIRE

Reason together

5

BUILD

Agree, disagree, add

6

REFLECT

Last words

Materials (per class)

- Argument cards
- Four-box sorting grid
- Question and thinking-move cards
- Worksheets 1, 2 and 3

Before the session

- Read the stimulus and note possible concepts.
- Prepare question and thinking-move cards.
- Set out a circle so everyone can see each other.
- Print the worksheets.

SAFETY

Everyone may pass. Discuss ideas, not people, and use the story or invented examples rather than personal situations.

ACTIVITY 03 · SESSION PLAN

Step by step

Stay neutral: ask for reasons, examples and counter-examples rather than giving your own view.

Time	What happens	Say or ask
0–8 min Stimulus	Share the four argument cards.	<i>“What did you notice?”</i>
8–20 min Questions	Students create questions in pairs and vote on one.	<i>“Which question is most interesting to talk about?”</i>
20–44 min Enquiry	Enquire into the chosen question, building on each other’s ideas.	<i>“Can an argument be logical but wrong?”</i>
44–50 min Last words	Each person says one last thought or passes.	<i>“Has your thinking changed?”</i>

CHALLENGE CARD (print or copy onto the board)

Write one valid argument with a false conclusion and explain why it is still valid.

ACTIVITY 03 · FACILITATOR NOTES

The philosophy in brief

An argument is valid if the conclusion must be true whenever the premises are true.

A sound argument is valid and has true premises.

Common ideas to listen for

- “Valid means true.” Validity is about structure.
- “A true conclusion proves good reasoning.” Invalid arguments can reach true conclusions.
- “Silly examples are useless.” They show structure clearly.

Adapting the activity

Support

Start with two boxes.

Stretch

Write one argument for each box.

WORKSHEET 1

Four boxes

Name: _____

Class: _____ Date: _____

Sort arguments.

Four boxes

Argument	Valid?	Premises true?

WORKSHEET 2

Thinking moves

Use these in the enquiry.

Thinking moves

Thinking move	My example
I agree with... because...	
I disagree with... because...	
An example is...	
A counter-example is...	
Building on what... said...	

WORKSHEET 3

Last words

Before and after.

What makes an argument good? Before the enquiry I thought... Now I think... because...

FOR THE TEACHER

Assessment checklist

Use during the session. One sheet covers up to eight students; copy as needed.

Student	Asks a philosophical question	Gives reasons and examples	Listens and builds on others

Suggested codes: W = working towards · E = expected · G = greater depth

ABOUT THIS ACTIVITY

Valid or True? is a sample activity from the EduTrend Contents P4C Logic and Critical Thinking programme (middle school, level: intermediate). Every activity in the programme follows the same format: a practical challenge, a clear session plan, facilitator notes and ready-to-print worksheets, so that teachers, club leaders and parents can run it without extra preparation.

Full 15-, 20- and 32-week programmes are available from EduStore at edutrend.org.

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