



Image from Nicolas Vollmer, Project 1080, Creative Commons License

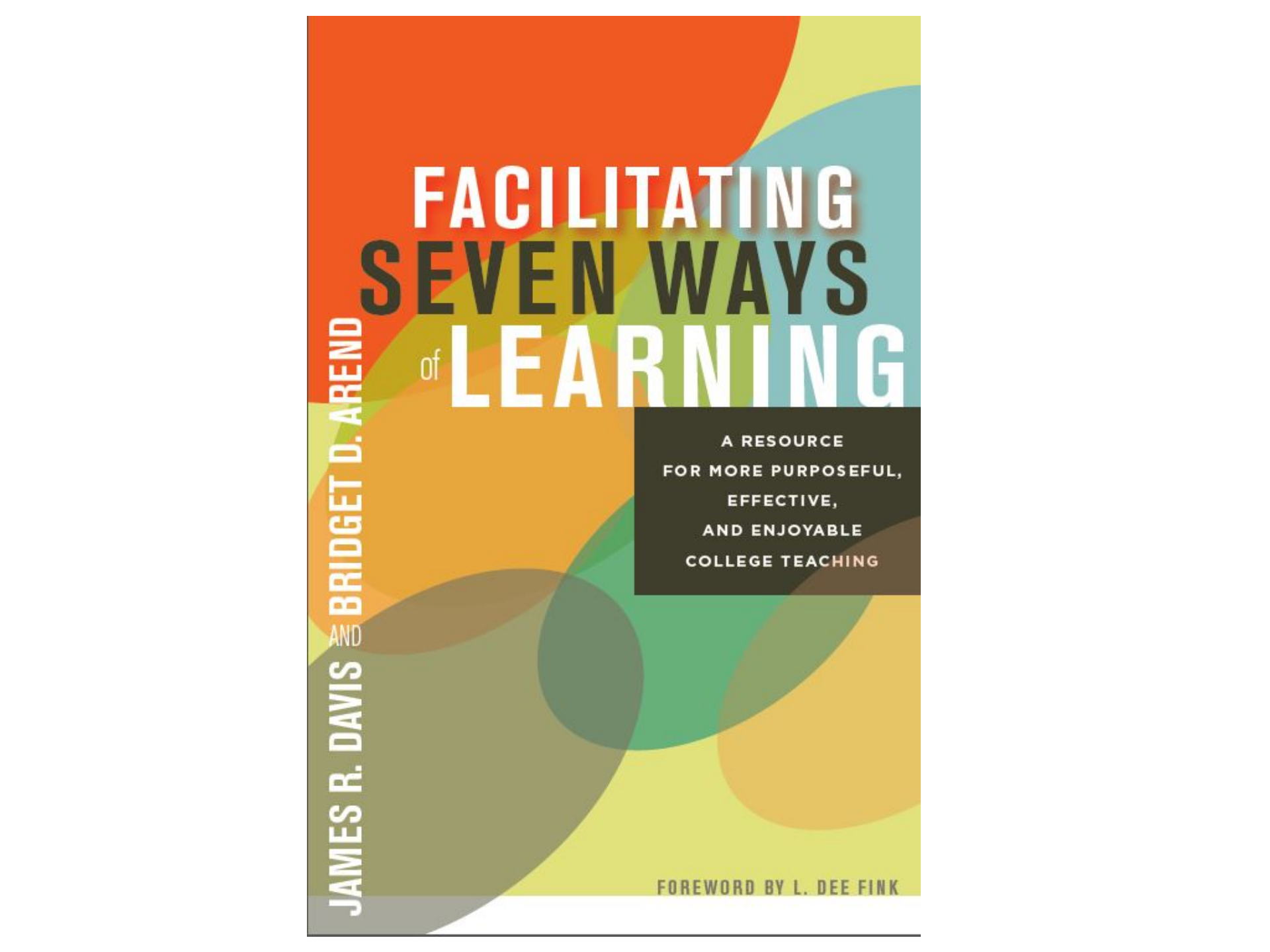
“A conference is just an admission that you want somebody to join you in your troubles.”

- Will Rogers

“There is nothing worse than a teaching method in search of a purpose.”

- Jim Davis

Purposeful



FACILITATING SEVEN WAYS of LEARNING

JAMES R. DAVIS
AND
BRIDGET D. AREND

A RESOURCE
FOR MORE PURPOSEFUL,
EFFECTIVE,
AND ENJOYABLE
COLLEGE TEACHING

FOREWORD BY L. DEE FINK

Acquiring
knowledge

Building
skills

Developing
critical, creative,
dialogical thinking

Cultivating
problem-solving
and decision-
making abilities


Exploring attitudes,
feelings, and
perspectives

Reflecting on
experience

Practicing
professional
judgment



Building
skills



Practicing
professional
judgment



Building
skills

Building
skills

Tasks and procedures

Practice and feedback

Behavioral Learning

Building
skills

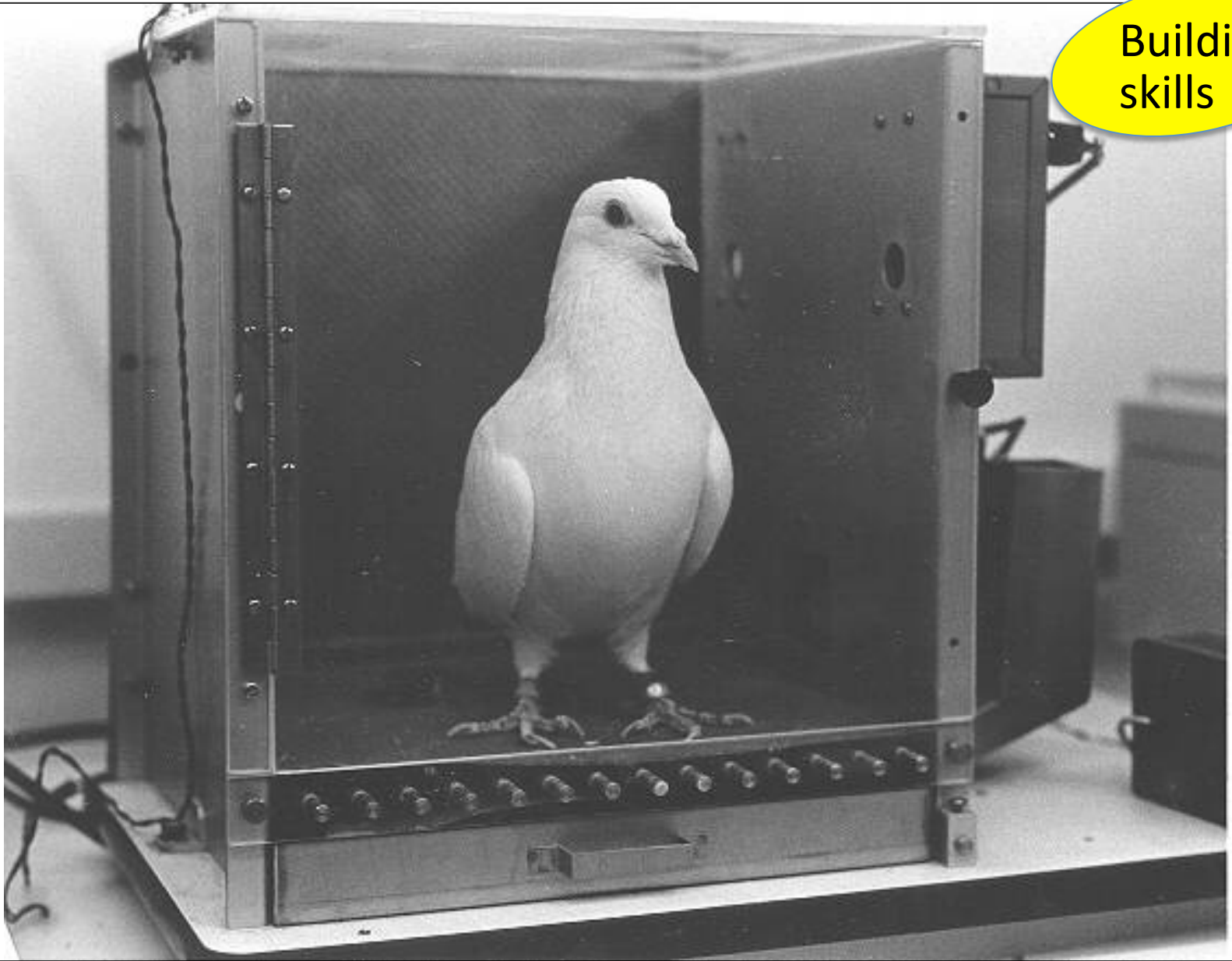


Image from <http://afflictor.com/tag/b-f-skinner/>

Task analysis – break skills into tasks and subtasks

Measure performance levels

Support successive approximations through practice

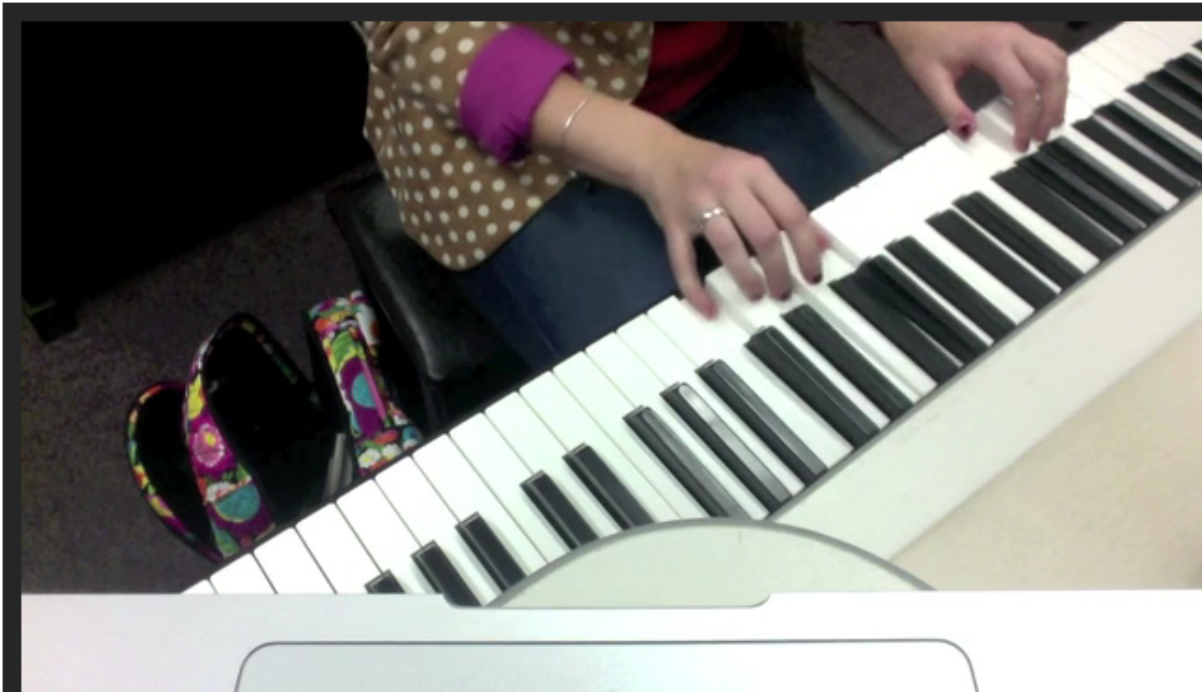
Reinforce through well timed and specific feedback



Building skills

Prof. David Montano / Music School / Student Practice Lessons

[Return to Video Group](#)



Add Video Bookmark

Tips

- 00:00:06 Bridget Arend
tempo is a little too slow in opening segment
- 00:00:15 Bridget Arend
nice transitions, you are getting much better at this
- 00:00:49 Bridget Arend
timing is a little off here

0:00:24 / 0:01:11

rewind 20 5 5 20 forward



[Download Bookmarks \(CSV\)](#)



Create Thumbnail Image

[Prepare Video Download](#)

Building
skills

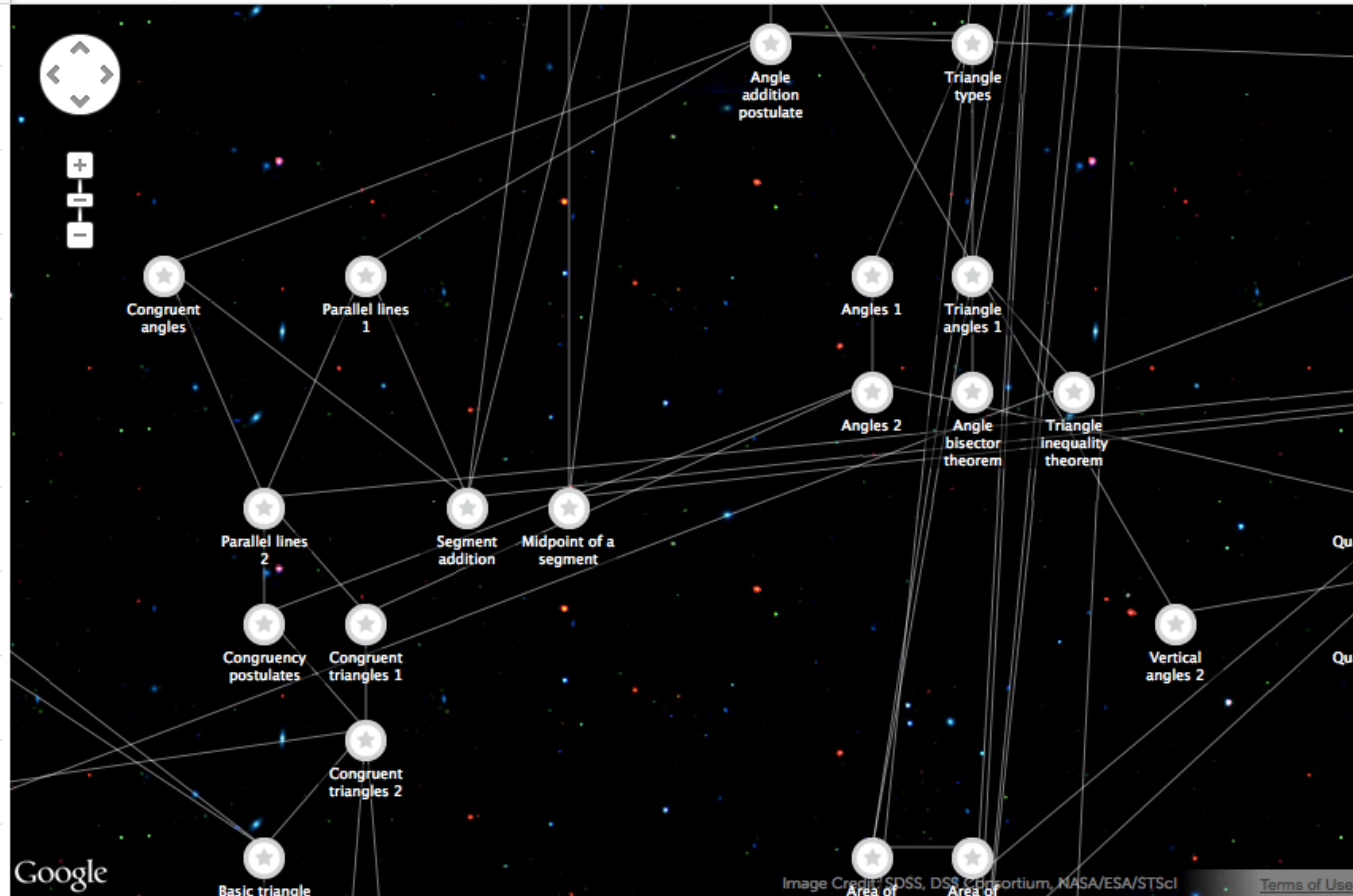


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Knowledge Map

Vital Statistics

- ★ Absolute value equations
- ★ Multi-step linear inequalities
- ★ Compound inequalities
- ★ Writing numerical inequalities
- ★ Adding vectors
- ★ Logical arguments and deductive reasoning
- ★ Conditional statements and truth value
- ★ Angles 2
- ★ Angle bisector theorem
- ★ Triangle inequality theorem
- ★ Graphing proportional relationships



bridget.arend

bridget.arend

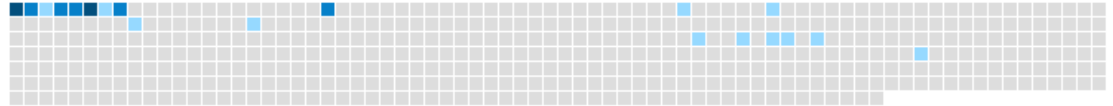
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15,180 energy points

Learning Dashboard

The World of Math

484



ACCOMPLISHMENTS

- Badges
 - Goals (beta)
- VITAL STATISTICS
- Activity
 - Focus
 - Skill Progress

COMMUNITY

- Discussion
- Programs
- Coaches

Multi-digit division without remainders

START

PRACTICE

YOU FINISHED!

Math Pretest
+1000 energy points

HAVE FEEDBACK?

Learn more about the dashboard, or leave us some feedback and help make the dashboard more awesome.

Give feedback

UP NEXT

Negative numbers on the number line

Identify positive and negative integers on the number line

PRACTICE

4-digit addition with carrying

Add two 3- or 4-digit numbers with carrying

PRACTICE

4.5 Solving Systems of Linear Inequalities

Objective: Solve systems of linear inequalities by graphing.

Navigation: << < 11 12 13 14 15 16 17 18 >> >>

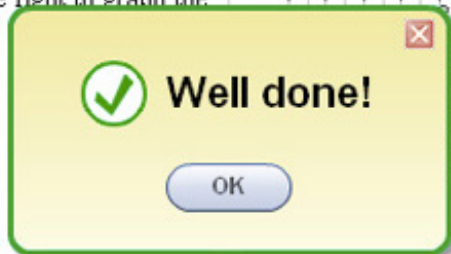
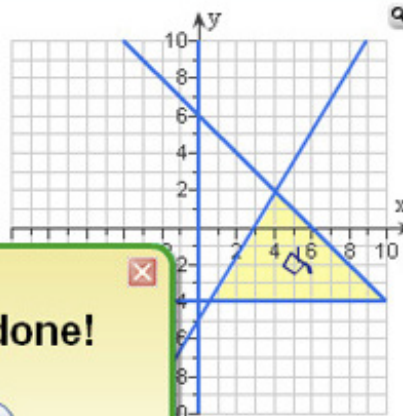
Question 4.5.23

1 correct | 1 of 18 complete

Graph the solution of the system of linear inequalities.

$$\begin{array}{ll} 5x - 3y \geq 15 & x \geq 0 \\ x + y \leq 6 & y \geq -4 \end{array}$$

Use the graphing tool on the right to graph the system of inequalities.



Help Me Solve This

View an Example

Textbook

Video

Animation

Ask My Instructor

Print

Click to select your answer(s), then click Check Answer.

All parts showing

Clear All

Check Answer

Close

Building skills

Let's continue practicing.

OK


- Expert
- Advanced
- Intermediate
- Beginner
- Pick One
- New Game

0-0	1-1	2-2	3-3	4-4	5-5	6-6	7-7	8-8	9-9	10-10	0
1-0	2-1	3-2	4-3	5-4	6-5	7-6	8-7	9-8	10-9	11-10	1
2-0	3-1	4-2	5-3	6-4	7-5	8-6	9-7	10-8	11-9	12-10	2
3-0	4-1	5-2	6-3	7-4	8-5	9-6	10-7	11-8	12-9	13-10	3
4-0	5-1	6-2	7-3	8-4	9-5	10-6	11-7	12-8	13-9	14-10	4
5-0	6-1	7-2	8-3	9-4	10-5	11-6	12-7	13-8	14-9	15-10	5
6-0	7-1	8-2	9-3	10-4	11-5	12-6	13-7	14-8	15-9	16-10	6
7-0	8-1	9-2	10-3	11-4	12-5	13-6	14-7	15-8	16-9	17-10	7
8-0	9-1	10-2	11-3	12-4	13-5	14-6	15-7	16-8	17-9	18-10	8
9-0	10-1	11-2	12-3	13-4	14-5	15-6	16-7	17-8	18-9	19-10	9
10-0	11-1	12-2	13-3	14-4	15-5	16-6	17-7	18-8	19-9	20-10	10

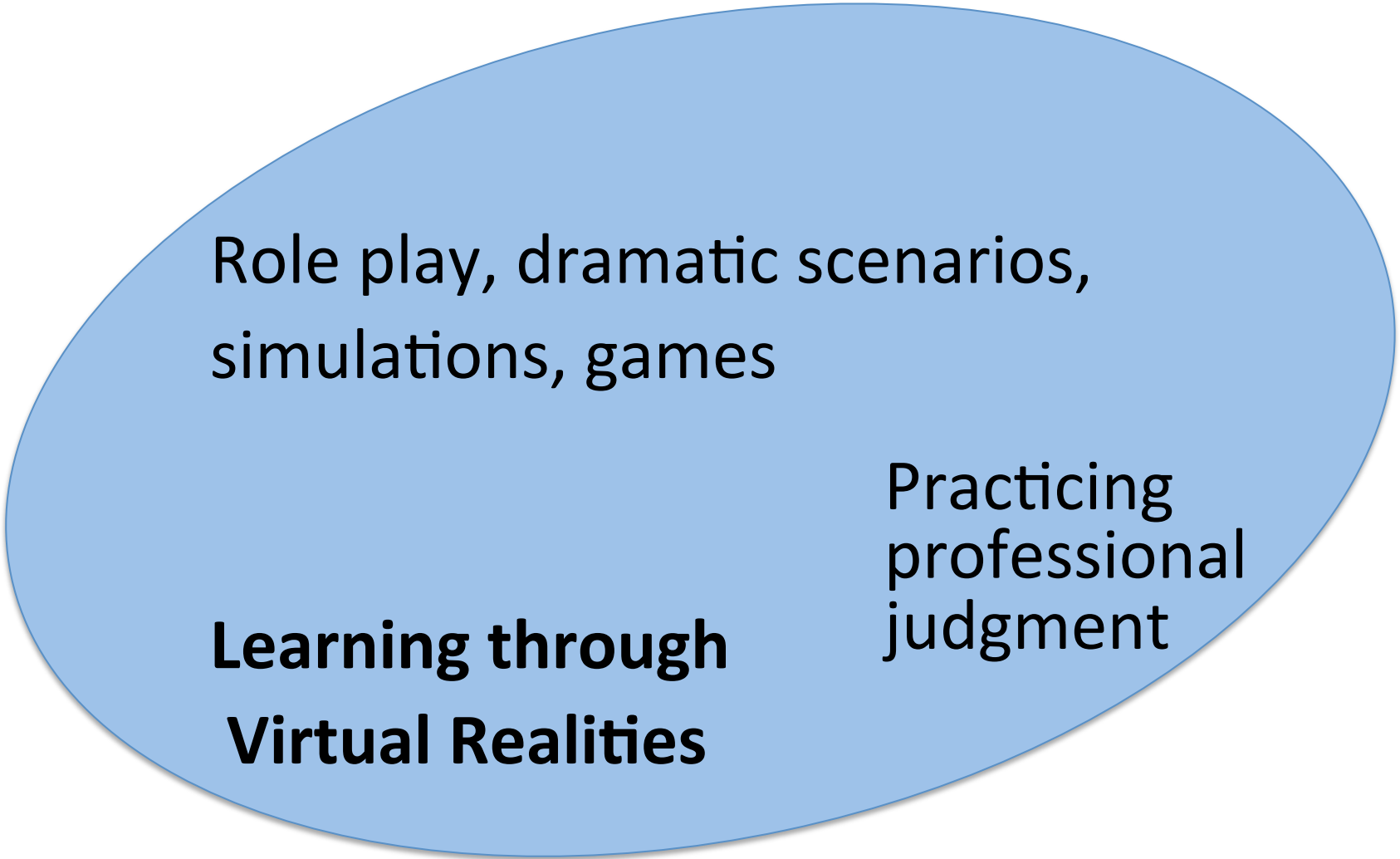


Building
skills





Practicing
professional
judgment

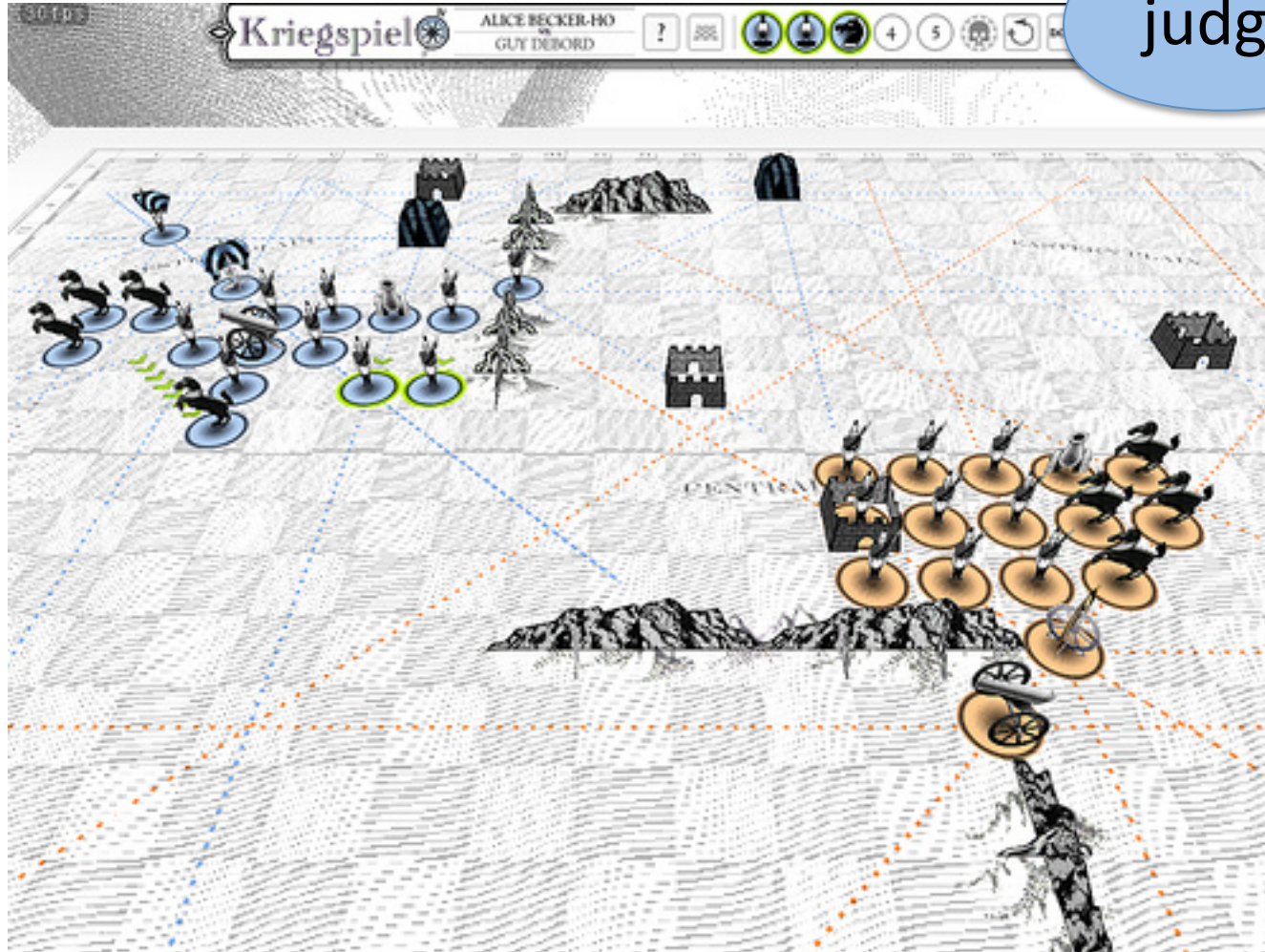


Role play, dramatic scenarios,
simulations, games

**Learning through
Virtual Realities**

Practicing
professional
judgment

Professional judgment



Over The Opening KRIEGSPIEL Guy Debords 1978 Game Of War, downloaded for free at <http://www.tophostgames.com/over-the-opening-kriegspiel-guy-debords-1978-game-of-war.html>

Professional
judgment



Image from Justin Wagner, Creative Commons license

Professional
judgment

Appropriate setting

Roles

Role expectations/conflicts/relationships

Reflection

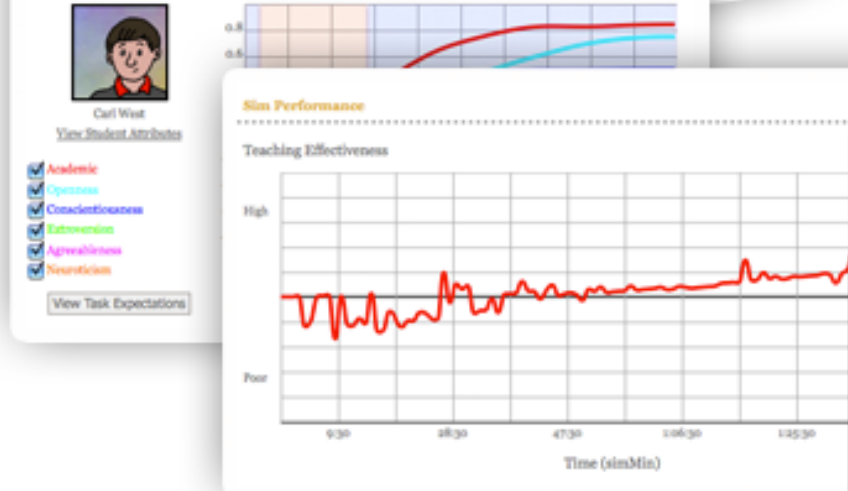
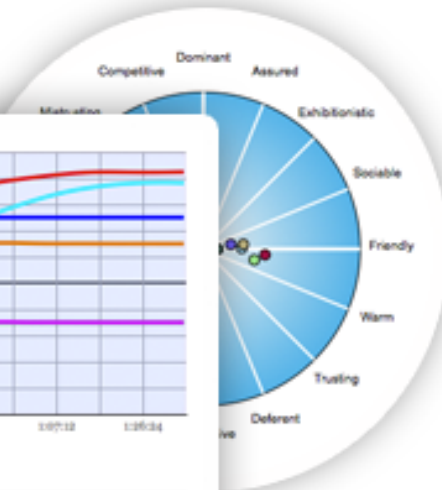
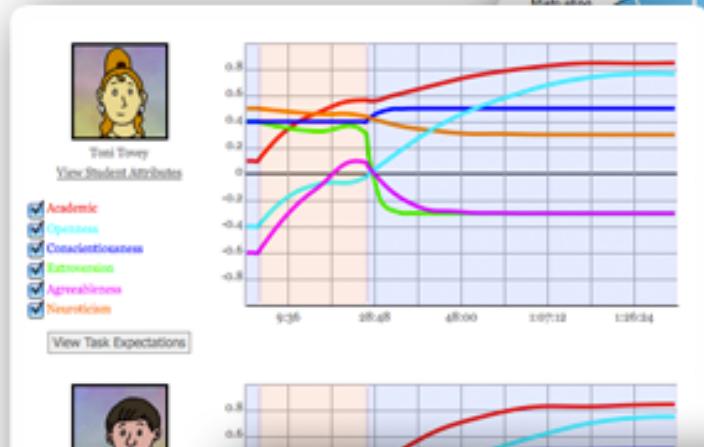
Debrief

Professional
judgment



Image from <http://www.peacemakergame.com/>

Professional judgment



Environmental Detectives

Professional judgment

Environmental Detectives was the first AR game created by the MIT TEP, targeted at high school and university students. In this game students play the role of environmental engineers who are presented with the following scenario at the beginning of the simulation:

- *During the construction of the underground garage of the new Stata Center (a big and controversial construction project) significant amounts of water are pumped up from the ground in order to lower the groundwater table so that the garage can be constructed in a dry environment. As a matter of regulation the water is tested for the 25 most commonly found chemicals in groundwater at hazardous waste sites. As a result of the testing it is discovered that a toxin is present in the extracted water. You call the President of the University to report and he asks, "How dangerous is this toxin? Where did the contamination come from and how widespread is it? Does MIT need to take some action (and what action might this be)? What do you advise?" You promise to call him back within three hours with your advice on the problem.*



“Good educational game design...piques players interest...offers multiple ways of playing...encourages social interaction...rely on academic knowledge and systemic understanding to achieve the goals.”

- Kurt Squire

Professional
judgment



Image from <http://misssands.wordpress.com/2012/01/26/chocolate-covered-broccoli/>

Acquiring
knowledge

Building
skills

Developing
critical, creative,
dialogical thinking

Cultivating
problem-solving
and decision-
making abilities

Exploring attitudes,
feelings, and
perspectives

Reflecting on
experience

Practicing
professional
judgment

Acquiring
knowledge

Presentations
Explanations

**Cognitive
Learning**

Acquiring
knowledge

Building
skills

Developing
critical, creative,
dialogical thinking

Cultivating
problem-solving
and decision-
making abilities

Exploring attitudes,
feelings, and
perspectives

Reflecting on
experience

Practicing
professional
judgment

Go forth and be
purposeful!