

PLAN UNITS with BLOOM'S
and
EXTEND STUDENT THINKING

Want to integrate the Key Competencies
and encourage
higher-level thinking with Bloom's?

|
with

JEAN EDWARDS

Using BLOOM'S incorporates
problem-solving, critical thinking and
creative thinking
in your programme in an
organised, accountable approach

Chart #1: Bloom's Taxonomy of Thinking Skills - original

1. Knowledge or Remembering: recalling specific information.

| | | | | | | | |
|--------|----------|---------|-------|-----------|-------|--------|-------|
| define | identify | examine | make | recognise | label | show | trace |
| recall | describe | collect | write | name | match | select | |

2. Comprehension: understanding of given information.

| | | | | | | | |
|-----------|--------------|------------|-----------|----------|-------------|----------|---------|
| translate | describe how | summarise | interpret | explain | extend | infer | rewrite |
| classify | demonstrate | categorise | restate | estimate | distinguish | contrast | |

3. Application: making use of the known.

| | | | | | | | |
|-----------|-------------|------------|---------|---------|--------|------------|------------|
| show | solve | experiment | examine | change | apply | illustrate | manipulate |
| calculate | demonstrate | practise | operate | prepare | employ | produce | |

4. Analysis: breaking down information into its constituent parts; taking apart the known.

| | | | | | | |
|---------|---------------------|----------|----------|----------|-------|------------|
| connect | interpret (results) | compare | identify | organise | order | categorise |
| select | break-down group | classify | diagram | | | |

5. Synthesis: putting together the new, using original, new, or creative thinking.

| | | | | | | | |
|---------|-----------|---------|---------|----------|-------------|-----------|-----------|
| design | compose | imagine | rewrite | redesign | hypothesise | create | advertise |
| combine | construct | develop | invent | add to | organise | translate | devise |

6. Evaluation: judging the outcome; judging the value of ideas through setting standards/criteria.

| | | | | | | | |
|-----------|----------|---------|--------|-------|-----------|---------|----------|
| interpret | appraise | explain | assess | judge | determine | justify | evaluate |
| criticise | grade | measure | decide | rank | defend | support | |

Further follow-up ideas and resources for Bloom's

Have a look at some American modules which are carefully structured research projects with plenty of scaffolding. Says Jamie Mackenzie, "They are efficient, demanding and highly motivating. They are engaging and productive.

"Two different models already exist for this type of project. They are quite similar in their demand for decision-making, problem-solving and novel thought." Try one . . .

Research Modules - Projects from schools around the world built upon the Research Cycle.
<http://questioning.org/module/module4.html>

WebQuests - Another model for extended research on demanding questions.
<http://edweb.sdsu.edu/webquest/webquest.html>

☛ **See also:** For examples of matrices of Bloom's crossed with Multiple Intelligences:
www.tki.org.nz/r/gifted/planning_matrix/index_e.php

Chart #2: Making your first Planning Outline using Bloom's

(Mainly language based; good for the beginning teacher as well as for younger students)

1. Remember or Know (checking that you can remember details)

- define the words
- identify/select (e.g. the most important/humorous/exciting...)
- draw and label (e.g. the most important/tragic/pathetic...)
- trace (e.g. a picture of the most important/evil/heroic...)
- recall (e.g. your favourite part/character) and...
- match (e.g. pictures with written descriptions)
- describe (e.g. the most important/saddest/funny/favourite...)
- name all the characters and...

2. Understand (checking that you understand the information)

- explain how
- explain why
- rewrite in your own words (restate)
- describe how
- summarise (briefly)

3. Apply (making use of the known)

- illustrate (e.g. a character in a new situation)
- change (e.g. the ending of the story so that...)
- solve (e.g. a dilemma/problem for a character)
- demonstrate to the class how...
- prepare (e.g. a booklet, report, diagram, diorama, map, tape)
- sketch (an outline of...)

4. Analyse (breaking down information into its parts, analysing the information)

- organise (e.g. group the characters under these three headings, do a PMI on...)
- compare (similarities, differences with; use black/yellow hat thinking...)
- classify (e.g. sort, make a collection of, make a Venn diagram of...)
- draw a graph/chart of...
- illustrate (e.g. the main events)
- prepare a questionnaire (e.g. finding out people's thoughts/opinions about...)
- make a graph to show people's feelings/thoughts about...
- identify (e.g. 5 main criteria for...)

5. Synthesise (putting together the new, using original or creative thinking)

- design (e.g. a poster/advertisement...)
- compose (a puppet play/skit/radio show/TV show/song...)
- construct (a news article/letter/cartoon...)
- imagine and rewrite (with a new character/new ending/different setting...)
- invent (a new game/ a machine/ a story/ a recipe/ a magazine...)

6. Evaluate (judging the value of the material)

- judge (be a judge; act out a trial. Guilty or innocent of...?)
- evaluate or judge using criteria (the effectiveness or value of whatever you have created; test it, rank it according to your criteria, and present the results)
- survey using criteria (using a list of 5 criteria, ask friends/family etc. for their scoring and comments on your new product/idea) and present your findings
- defend (e.g. pretend you are the lawyer defending —; on TV or radio. Act out or write up your defence...)
- rank using criteria (list in order of importance/value/truth...)
- predict (e.g. what may happen in the future if...) with your reasons
- recommend (e.g. new ways of improving/altering; and explain your reasons here)

by Jean Edwards www.thinkshop.org

Chart #3: Planning outlines using Bloom's for older students

• TOOLBOX

1. Remember or Know - do you remember?

- define the words... (e.g. you would list here the main vocabulary for this unit)
- name the main... (e.g. towns, ideas, factors, influences...)
- trace/draw and label... (e.g. a map, a diagram, an illustration...)
- describe... (e.g. the main points from an article/book/photos...)
- match... (e.g. pictures with written descriptions)

- match up cards
- label
- highlight
- white hat (facts)

2. Understand - do you understand?

- explain how... (e.g. the inhabitants make a living; main factors affecting...)
- summarise... (e.g. the main factors affecting inhabitants; history of...; means of livelihood...)
- explain why...
- rewrite in your own words...
- summarise (briefly)...

- use bullet points
- fill in a prepared simple flowchart or mindmap (title + 1 level)

3. Apply - using what you know

- illustrate... (e.g. a village, a method, a building...)
- prepare... (e.g. a diary, a mobile, a talk, a chart, a map...)
- calculate... (e.g. the number of km, the cost of...)
- demonstrate to the class how...
- prepare... (e.g. a diary, a model showing, a booklet, a diagram, a diorama, a tape...)
- sketch... (an outline of...)

- flow-chart or mindmap (e.g. Kidspiration, Inspiration) on supplied outline
- CAF
- simple slideshow

4. Analyse - breaking down information into its parts, analysing the information

- organise or group... (e.g. the info under these 3 headings; do a PMI on...)
- compare... (e.g. similarities/differences with; do black/yellow hat thinking about...)
- classify (e.g. sort, make a Venn diagram of...)
- identify... (e.g. the main factors affecting...; the main reasons why...; 5 main criteria for...)
- select... (e.g. 5 main points and prepare a questionnaire/ a graph...)
- conduct a survey and graph/chart your findings

- red: white hat (feelings v. fact)
- black: yellow hat (strengths v. weaknesses)
- PMI (CoRT) e.g. on computer
- AGO (CoRT)
- Venn diagram
- flowchart from scratch

5. Synthesise - putting together the new, using original or creative thinking

- design... (e.g. a poster, an advertisement...)
- compose... (e.g. a radio spot, a play, a TV show, a song, about...)
- construct... (e.g. a newsletter, a cartoon, a letter, a news article, a slideshow...)
- invent... (e.g. a new game, a machine, a story, a recipe, a magazine, a new setting...)
- imagine and rewrite... (e.g. with a different ending, with different influencing factors...)
- identify... (e.g. the main problem(s) affecting...; 5 criteria for a successful...)

- form own questions from data;
- creative challenges
- invent criteria (e.g. CPS)
- flowchart (multi-level)

6. Evaluate - judging the value of the material e.g. in a flowchart or slideshow

- evaluate using criteria... (e.g. the effectiveness or value of what you have created - test it, rank it according to your criteria, and write up the results)
- survey using criteria... (e.g. using a list of criteria, ask friends/parents etc. for their scoring and comments/opinions of your new idea/solution/proposal...) and present your findings
- rank using criteria... (e.g. list in order of importance, value, truth, use, beauty, etc...)
- recommend... (e.g. new ways of improving/altering, also explaining your reasoning here...)
- predict (e.g. what may happen in the future if...) with supporting reasons

- debate
- flowchart with linked summary or recommendations in essay form
- rank or justify using criteria
- CPS & FPS
- philosophical discussion with final decision still open to further development

My Bloom's planning outline

Topic: _____

Name: _____

Date: _____

1. **K** _____ or **R** _____

2. **U** _____

3. **A** _____

4. **A** _____

5. **S** _____

6. **E** _____

My planning sheet

Name: _____

1. These are the activities I have chosen to do:

(Write a couple of words in each box to explain the activity, the number of points it's worth, then highlight boxes as you complete them)

| | | | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Point | Points | Points | Points | Points | Points | Points | Points | Points |

2. I have filled out the Class Planning Sheet too.

Sample of activities using Bloom's Six Levels

Charlotte's Web

Level 1B

DEFINITIONS

Define these words (give their meanings) and use each in a sentence to show you understand the meanings:

- runt (ch.1, p.1)
- affection (ch.1, p.3)
- injustice (ch.1, p.3)
- arable (Mr. Arable's name!)
- captivity (ch.3, p.22)
- objectionable (ch.5, p.35)
- anaesthetic (ch.7, p.48)



from ThinkPack No.1 by Jean Edwards @ThinkShop 2001

Charlotte's Web

Level 1C

TEMPTING SMELLS

Fern's kitchen smelled of coffee, bacon, damp plaster and wood-smoke.

Recall some of your favourite smells

- at least three for each topic:

- a) When you're camping
- b) At mealtime
- c) In everyday life.

Write them in a list, and illustrate them if you wish!



from ThinkPack No.1 by Jean Edwards @ThinkShop 2001

Charlotte's Web

Level 2A

A HEROINE...

Describe briefly in your own words how Charlotte managed to save Wilbur's life.



from ThinkPack No.1 by Jean Edwards @ThinkShop 2001

Charlotte's Web

Level 4B

EGGS IN HIS MOUTH

Using comic-strip format, illustrate Wilbur winning the special medal at the Fair, and coming home with the medal around his neck and eggs in his mouth.

Use no more than 10 frames for your strip - so choose carefully what you want to illustrate.

Put your final copy on construction paper and display it in the classroom for your classmates to enjoy!



from ThinkPack No.1 by Jean Edwards @ThinkShop 2001

Charlotte's Web

Level 5E

YOU ARE WILBUR..

Chapter 1 describes baby Wilbur arriving in Fern's kitchen in his wobbly cardboard carton.

Read this chapter again, then imagine you are Wilbur.

Write a short story or poem from Wilbur's point of view (put yourself in his trotters!) and describe how he experienced this first meeting with the Arable family.



from ThinkPack No.1 by Jean Edwards @ThinkShop 2001

Charlotte's Web

Level 6B

WHAT DO YOU LOOK FOR IN A FRIEND?

In chapter 6 Wilbur meets his new friend for the first time. Read this chapter again and see the different thoughts that go through Wilbur's mind.

Make a list of at least 6 things, or personality traits, which you think you look for in a friend. Then ask at least 10 others in your class, and your parents, to make up their own lists too.

Make a chart, (a bar chart would be great) to show the things that people look for in a friend. (This chart might help a lot of people!)



from ThinkPack No.1 by Jean Edwards @ThinkShop 2001

Sample of activities using Bloom's Six Levels

The Human Brain

Level 1B

DESCRIBE in point form the functions of the left and right hemispheres of the brain.

from Thinking about the Human Brain by Jean Edwards ©ThinkShop 2002

The Human Brain

Level 2A

EXPLAIN the main symptoms of one of the following:

- senile dementia
- Alzheimer's
- thinking
- Hodgkinson's
- stroke
- concussion
- sleeping
- Parkinson's

Show your findings on some form of time-line (e.g. vertical or horizontal bar-line, movie-strip...)

from Thinking about the Human Brain by Jean Edwards ©ThinkShop 2002

The Human Brain

Level 3A

RESEARCH how one of the following is supposed to work:

- brain gym
- TM (Transcendental Meditation)
- biofeedback
- relaxation techniques

DEMONSTRATE to the class at least 3 different exercises.

from Thinking about the Human Brain by Jean Edwards ©ThinkShop 2002

The Human Brain

Level 4C

Eastern medicine uses a healing method called ACUPUNCTURE.

RESEARCH information as to how it works. (Earn an extra point here if you interview a local acupuncturist; include a copy of the questions you prepared before the interview.)

Then IDENTIFY at least 3 main reasons why acupuncture works on some people.

from Thinking about the Human Brain by Jean Edwards ©ThinkShop 2002

The Human Brain

Level 5A

DEFINE the meaning of "great minds".

IF YOU COULD CHOOSE to be a great mind of the future, what area or "field" would you choose to specialise in? Give at least 3 reasons for your choice.

Then, RESEARCH and EXPLAIN briefly what training and skills you would need for you to become an expert in this field for real. (A time-line would be great here!)

from Thinking about the Human Brain by Jean Edwards ©ThinkShop 2002

The Human Brain

Level 5B

WATCH A MOVIE!

Watch one of the following movies about people classified as insane: (NOTE: your parents' permission is needed first - some of these are adult content.)

- One Flew Over the Cuckoo's Nest
- The Rain Man
- The Awakening (with Robert de Niro)
- An Angel at My Table

Then, PAINT A PICTURE or WRITE A STORY OR POEM to show how the movie affected your thinking.

from Thinking about the Human Brain by Jean Edwards ©ThinkShop 2002

The Human Brain

Level 6B

LEFT-HANDED? Find out the names of FOUR FAMOUS LEFTIES!

Then, RESEARCH the effects of being left- and right-handed. Summarise the differences (if any) on brain structure and on abilities.

Now SURVEY your classmates to see if your findings apply. Present your findings in chart form, with a paragraph summarising the results, and recommending any changes that could be made in classes to help learning.

from Thinking about the Human Brain by Jean Edwards ©ThinkShop 2002

The Human Brain

Level 6D

Did you know that suicide rates are highest in the dark winter months? RESEARCH the effects of sunlight on people's moods.

Then, LIST as many major factors as you can, that 25 people you interview think affect their moods (e.g. colours, sun...).

Next, choose the 5 most common factors from your interviews. Then present these 5 factors to the same 25 people, in a list, and ask them to RANK them in order of affect on them.

Present your findings in chart form.

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