TEACHING DECISION-MAKING

Janis A. Bulgren







Brainstorm & Discuss

 What types of personal decisions do you hear students discuss?

 What types of decision-making do you encounter in content area classes?

- What standards in your state involve decision-making?
- Discuss: What type of issue will you use the decision-making guide for?

Purpose

"Teaching Decision-Making" is a package of instructional methods that teachers can use to help students engage in reasoning.

Although "reasoning" has many definitions, it is used here to identify an issue, options that could respond to the issue, ranking those options, considering other options, and making and explaining that decision.



Supporting Research

SUBJECTS & CONTENT

200 students in grades 7 & 8 in science and social studies (LD, LA, AA, HA).

ASSESSMENT OUTCOMES

Students in experimental group significantly outperformed those in control group overall on

- * ability to make a decision on an unencountered content areas issue, and
- * learn the steps of the cognitive strategy

CORRELATION BETWEEN

- * knowledge of strategy and ability analyze a decision-making challenge and
- * between quality notes and ability to analyze decision-making



Components of the Decision-Making Routine



The Decision Making Guide

1. Teaching Device

The Decision

2. Linking Steps

The

3. CUE-DO-REVIEW

Sequence

Name:	Date:C	lass:	Topic:	
1. <u>D</u> ecide the issue				
3. Create important	2. Enter Option A		2. Enter Option B	
information	4. Identify reasons for option A	5. <u>S</u> et Rank	4. Identify reasons for option B	5. <u>S</u> et Rank
6. <u>I</u>dentify compromises7. <u>O</u>ffer a decision8. <u>N</u>ame reasons for the				

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Rank Key =

Date:		Class:		Topic:	
ie					
2. Enter Option A		2. Enter Option B		2. Enter Option C	
4. Identify reasons for A	5. <u>S</u> et Rank	4. <u>I</u> dentify reasons for B	5. <u>S</u> et Rank	4. <u>I</u> dentify reasons for C	5. <u>S</u> et Rank
omises/alternatives n for the decision					
	2. Enter Option A 4. Identify reasons for A omises/alternatives	2. Enter Option A 4. Identify reasons for A Comises/alternatives	2. Enter Option A 4. Identify reasons for A 5. Set Rank omises/alternatives	2. Enter Option A 4. Identify reasons for A Rank 5. Set Rank 5. Set Rank omises/alternatives	2. Enter Option A 2. Enter Option B 2. Enter Option C 4. Identify reasons for A 8. Set Rank 4. Identify reasons for B Rank 6. Set Rank 7. Set Rank 8. Set Rank 9. Se

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rame:bate: Glass: ropic:	Name:	Date:	Class:	Topic:
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1. <u>D</u> ecide the issue	Use of Chemical Pesticides					
3. <u>C</u> reate important	2. Enter Option A Use chemical pe	sticides	2. Enter Option B Ban chemical pesti			
information Pesticide: substance to control pests and weeds Chemical pesticide: artificial substance to control pests and weeds	Identify reasons for option A Government agencies such as the FDA check safety of chemical pesticides.	5. <u>S</u>et Rank 2	Identify reasons for option B Biological pest controls like green lacewings can replace chemical pesticides.	5. <u>Set</u> Rank 2		
Biological pest control: control of pests and weeds using other organisms, such as green lacewings that eat other insects	We need pesticides like DDT to control diseases like malaria.	3	 Imported food is contaminated, so the ban should be worldwide. New pesticides cause even 	1 3		
such as aphids The Food & Drug Administration (FDA) regulates pesticides	Pesticides are needed to produce enough food so people don't starve.	5	more cancer than older pesticides.			
DDT: chemical pesticide dichlorodiphenyltrichloroethane	Some tests show that chemical pesticide amounts in our food are so small we don't have to worry.	2	 Groundwater contains pesticides, so we have used too much. 	4		

6. Identify compromises/alternatives

Use chemical pesticides only if they have passed special testing to be sure they are safe.

7. Offer a decision

I think we need to continue to use chemical pesticides.

8. Name reasons for the decision

World hunger is such a big problem that we need to take risks to feed starving people.

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Name:	Date:Cla	ass:	Topic: _			
1. <u>D</u> ecide the issue	Use o	f Chemical Po	esticides			
2 Croote important	2 Enter Option A Lice chamics	l posticidos	2 Enter Option P	Pan chamical pa	cticidos	
information Pesticide: substance to control pests and weeds Chemical pesticide: artificial substance to control pests and	Government agencies the FDA check safety of	5. <u>S</u> et	d. Identify reasons fo Biological pest congreen lacewings ca	trols like	5. <u>S</u> et Rank 2	
weeds Biological pest control: control of pests and weeds using other organisms, such as green lacewings that eat other insects	Section 1: Contains the name of the issue taminated, that requires critical thinking and reasoning. Should be a short word or					
The Food & Drug Administration (FDA) regulates pesticides	phrase that s	phrase that states the issue.				
DDT: chemical pesticide dichlorodiphenyltrichloroethane	Some tests show that chemical pesticide amounts in our food are so small we don't have to worry.	ourfood			4	
6. Identify compromises/alter					·	
	nly if they have passed special testing	to be sure the	ey are safe.			
7. Offer a decision						
I think we need to continu	e to use chemical pesticides.					
8. Name reasons for the decise World hunger is such a big	ion g problem that we need to take risks	to feed starvin	g people.			

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1. <u>D</u> ecide the issue		esticides			
3. <u>C</u> reate important	2. <u>E</u> nter Option A	Use chemical pe	sticides	2. Enter Option B Ban chemical pes	sticides
information	4 Identify reasons	for ontion A	5 Sot	4 Identify reasons for option B	5 Sot
Pesticide: substance to control pests and weeds			Rank		Rank
•	• Gover	ncies such as	2	Biological pest controls like	2
Chemical pesticide: artificial substance to control pests and	th	fety of		green lacewings can replace	
weeds				chemical pesticides.	
Biological pest control: control	• We	es like DDT	3	Imported food is contaminated,	1
of pests	to	os liko		so the ban should be worldwide.	
organisi				Now posticidos causa aven	
lacewin such as Section	2: Options (E	nter Option	s)	New pesticides cause even more cancer than older	3
l Can recor	d two or thre	e options he	ere.	pesticides.	
The Fod (FDA) re Should be of	clear and cond	isely stated	The		
		•		Groundwater contains pesticides, so we have used too much.	4
	ed to be in pa				
dichlord Students ma	ay work as inc	lividuals, pa	irs, or	•	
in sma	ll groups to er	nter options	•		
6. <u>I</u> den	•	•		are safe.	
7. Offer a decision				are sare.	
I think we need to contin	ue to use chemical pes	ticides.			
8. Name reasons for the deci	sion				
World hunger is such a bi		ed to take risks to fe	ed starvin	ng people.	

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Name:	Date:	Class:	Topic	:	
1. <u>D</u> ecide the issue	Use	of Chemical P	esticides		
3. Create important information Pesticide: substance to control pests and weeds Chemical pesticide: artificial substance to control pests and weeds Biological pest control: control of pests and weeds using other organisms, such as green lacewings that eat other insects such as aphids The Food & Drug Administration (FDA) regulates pesticides DDT: chemical pesticide dichlorodiphenyltrichloroethane	 2. Enter Option A Use chem 4. Identify reasons for option A Government agencies such a the FDA check safety of chemical esticides. We esticides like DDT the starve Some tests show that chemic pesticide amounts in our foo are so small we don't have tworry. 	Section 3 (Creatinformal that informal relevant can be a section paraphra	2. Enter Option B 3: Important ate a list of Important ate a list of Important ation) Words represent important important at topics. Adducted at anythic work with a se their sugginal words, phrase sentences.	portant or phrases portant itions, or itional info time to this student to gestions into es, or short	icides i. <u>Set</u> tank 2 1 3
<u> </u>	,	ing to be sure the		-	
7. Offer a decision I think we need to continue	e to use chemical pesticides.				
8. Name reasons for the decisi World hunger is such a big	i on problem that we need to take ris	ks to feed starvir	ng people.		

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Name:		Date:Class:_		Topic:			
1. <u>D</u> ecide the issue)	Use of Chemical Pesticides					
3. <u>C</u> reate importar	nt	2. Enter Option A Use chemical pe	sticides	2. Enter Option B Ban chemical pesticides			
information	to control	4. <u>I</u> dentify reasons for option A	5. <u>S</u> et Rank	4. <u>I</u> dentify reasons for option B	5. <u>S</u> et Rank		
Section 4: Reasons (Identify	rtificial pests and	 Government agencies such as the FDA check safety of chemical pesticides. 	2	 Biological pest controls like green lacewings can replace chemical pesticides. 	2		
reasons to support each decision)	ol: control sing other	 We need pesticides like DDT to control diseases like malaria. 	3	 Imported food is contaminated, so the ban should be worldwide. 	1		
This section is used to explain why the option is	een ner insects	 Pesticides are needed to produce enough food so people don't 	5	 New pesticides cause even more cancer than older pesticides. 	3		
acceptable approach to the issue. Engage	nane	 Some tests show that chemical pesticide amounts in our food are so small we don't have to 	2	 Groundwater contains pesticides, so we have used too much. 	4		
students in a discussion as to whether one	mises/alter esticides on	worry. natives lly if they have passed special testing to be	e sure the	ey are safe.			
reason might be	to continue	e to use chemical pesticides.					
stronger than another.		on problem that we need to take risks to feed starving people. en. University of Kansas Center for Research on Learning (2018).					

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Name:		ate:Class:		Topic:		
1. <u>D</u> ecide the		Use of Ch	emical Pe	esticides		
3. <u>C</u> reate imp		Use chemical pe	sticides	2. Enter Option B Ban chemical pe	ticides	
information Pesticide: subs	rank for each reason)	s for option A	5. <u>S</u> et	4. Identify reasons for option B	5. <u>S</u> et	
pests and wee	This section is used to	·	Rank		Rank	
Chaminal manti	indicate the	encies such as	2	Biological pest controls like graph lacewings can replace	2	
Chemical pesti substance to c	importance or	safety of cides.		green lacewings can replace chemical pesticides.		
weeds	relative ranking of			·		
Biological pest	each reason. Each	ides DDT	3	 Imported food is contaminated, so the ban should be worldwide. 	1	
of pests and w organisms, suc	reason is labeled with	_ \		30 the ball should be worldwide.		
lacewings that		>	_	New pesticides cause even	3	
such as aphids	numerical or a symbol	e	5	more cancer than older pesticides.		
The Food & Dr (FDA) regulate		\square /				
		w that chemical	2	 Groundwater contains pesticides, so we have used too much. 	4	
DDT: chemical dichlorodipher	Two or more reasons	nts in our food				
	can have the same	e don't have to				
6. <u>I</u> dentify co	ranking. Tip: write in					
Use chen	a scale at bottom of	ed special testing to b	e sure the	ey are safe.		
7. Offer a dee	paper.	sticides.				
8. <u>N</u> ame reas	ons for the aecision	J				
World hu	nger is such a big problem that we n	eed to take risks to fe	ed starvin	g people.		

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Date:

Class:

Topic:

1. <u>D</u> ecide the issue	<u>Decide the issue</u> Use of Chemical Pesticides						
3. <u>C</u> reate important	2. Enter Option A Use chemica	l pesticides	2. Enter Option B Ban chemical pes	ticides			
information Pesticide: substance to control	4. Identify reasons for option A	5. Set	4. Identify reasons for option B	5. Set			
pest	Compromises or Altern	ativos (I	dontify compromises or	ık ?			
5405	•	•	dentify compromises or				
wee alternatives) A	l compromise retains s	ome par	ts of one option and som	ie			
parts of the of	ther option. An alterna	ative is a	n option that proposes a	n [
orga lace such	entirely new response.						
The Food & Drug Administration (FDA) regulates pesticides	starve.		 Groundwater contains pesticides, 				
DDT: chemical pesticide dichlorodiphenyltrichloroethane	Some tests show that pesticide amounts in our are so small we don't have worry.		so we have used too much.	4			
6. Identify compromises/alter	natives	,					
Use chemical pesticides or	lly if they have passed special testing	to be sure the	ey are safe.				
7. Otter a decision							
I think we need to continu	e to use chemical pesticides.						
8. Name reasons for the decis							
World hunger is such a big	problem that we need to take risks t	o feed starving	g people.				

Name:

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Class:

Topic:

Date:

1. <u>D</u> ecide the issue	ecide the issue Use of Chemical Pesticides						
3. <u>Create important</u>	2. Enter Option A Use chemical pes	ticides	2. Enter Option B Ban chemical per	sticides			
information Pesticide: substance to control pests and weeds	4. Identify reasons for option A 5. Set Rank		4. Identify reasons for option B				
	Government agencies such as	2	 Biological pest controls like 	2			
of poor small grou	One or more sentences that each student or group makes for selecting one option over another. This section may be filled out by individuals, small groups, or whole class. The statement should indicate the following: the name of the issue that was the focus of the thinking AND						
DDT: chemical pesticide dichlorodiphenyltrichloroethane	Some tests show that ch pesticide amounts are so small we don't worry.		so we have used too much.	4			
6. Identify compromises/alter	natives	•		•			
Use chemical pesticides or	lly if they have passed special testing to b	e sure the	ev are safe.				
7. <u>O</u> ffer a decision							
I think we need to continu	e to use chemical pesticides.						

World hunger is such a big problem that we need to take risks to feed starving people.

8. Name reasons for the decision

Name:

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Name:		Date:	Class:		Topic	:		
1. <u>D</u> e	1. <u>Decide the issue</u> Use of Chemical Pesticides							
	eate important	2. Enter Option A	Use chemical pes	ticides	2. Enter Option B	Ban chemical pe	sticides	
Pestic	mation ide: substance to control	4. <u>I</u> dentify reasons fo	or option A	5. <u>S</u> et Rank	4. <u>I</u> dentify reasons	for option B	5. <u>S</u> et Rank	
Chei subs wee Biolo of po orga lace such The (FDA	Section 8: Explain (Name reasons for the decision) One or more sentences that represent reasons for selecting one of the options over another OR a compromise/alternative option. The statement should indicate the following: (a) reasons identified in section 4 that best support the choice as indicated by rankings in section 5, (b) explanation of why some reasons were judged to be too							
	rodiphenyltrichloroethane	pesticide amounts are so small we d worry.		Image: Control of the				
_	6. Identify compromises/alternatives Use chemical pesticides only if they have passed special sure they are safe.							
7. <u>O</u> f	7. Offer a decision I think we need to continue to use chemical pesticides.							
_	8. Name reasons for the decision World hunger is such a big problem that we need to take risks to feed starving people.							

Name:

Things to do before using the guide with students

- 1. Select the issue to be analyzed with a decision-making guide.
 - a) Critical issues can be found in textbooks, standards, district curricula, state/district assessments, etc.
 - b) When selecting an issue as these questions: Is the issue of real importance? Is it worthy of the time it will take to prepare and implement? Will the students be interested?
- 2. Construct a draft to be used as a reference for the teacher only during co-construction.
- 3. Make sure students have background knowledge of the issue to be analyzed. Assign a current article/website to read, assign a reading from the textbook, or ask students to watch a video. Etc.
- 4. Help students determine the issue from the reading. Some synonyms that can help students identify an issue are: question, subject, topic, problem, challenge, etc.

Reasoning Process

With "Teaching Decision-Making," students learn to

- identify an issue
- identify and explore options
- rank those options,
- consider other options,
- make a judgment to choose one option, and
- explain that decision.

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THREE Components of the Decision-Making Routine



The Decision Making Guide

1. Teaching Device

The Decision

2. Linking Steps

The

3. CUE-DO-REVIEW

Sequence

Steps of the Decision-Making Routine: Cue-Do-Review

CUE

- 1. Cue students about the importance of the issue
- 2. Cue students about use of the Guide
- 3. Cue students about note-taking
- 4. Cue students about participation expectations

DO

- 1. Decide the issue
- 2. Enter options
- 3. Create a list of important information
- 4. Identify reasons to support each option
- 5. Set rank for each reason
- 6. Identify compromises or alternatives
- 7. Offer a decision
- 8. Name reasons for the decision

REVIEW

- 1. Review learning outcomes
- 2. Review process of learning
- 3. Predict where the learning or process will be used again

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Steps of the Decision-Making Strategy

Decide the issue

Enter options

Create a list of important information

Identify reasons to support each option

Set rank for each reason

Identify compromises or alternatives

Offer a decision

Name reasons for the decision

ACRONYM for the Decision-Making Strategy:

DECISION

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Sample **Decision-Making Guide** related to "Term Limits for Congress" with essay writing prompts





5. <u>Set</u>

1

3

4

Name: _____ For Paragraph 1, use Section 1 for topic sentence and Section 3 for background information.

ate: ______Topic: ____

Term Limits for Congress

5. <u>Set</u>

Rank

3

2

3

3

3. Create important information

- The Constitution sets term limits for Congress.
- Representatives are elected for terms of 2 years, Senators of 6 years.
- The Constitution can be amended and has 25 amendments.
- Presidents' terms limited to two after FDR served four terms
- Lobbyists: people paid to influence lawmakers to vote in ways that benefit special interests.

2. Enter Option A	Impose terms limits
-------------------	---------------------

4. Identifareasons for option A

- Special interest groups might have less power over members of Congress because they wouldn't have long working relationships with lobbyists.
- Constitution should be changed because times charging the spend of For Paragraph 2, use hing the four Section 2A to identify Option A, Section 4A for
- Term limits would save money because less money would be spent on re-elections.

reasons, and Section 5A

for strength of reasons.

2. Enter Option B Don't impose term limits

4. Identifareasons for option B

- Special interest group lobbyists might have 5 more power due to new members' inexperience and need for donations
- Changing term limits would mean changing to the Constitution; founding athers did not want to
- For Paragraph 3, use
 Section 2B to identify
 Option B, Section 4B for reasons, and Section 5B for strength of reasons.
- Term limits for governors and presidency have not solved the problem of money being spent on campaigns.

6. Identify compromises/alternatives

I don't see any compromises to this question.

For Paragraph 4, use Section 6 to present alternatives or compromises and reasons for each.

7. Offer a decision

I think we should not impose term limits for Congress.

New

8. Name reasons for the decision

Issues such as lobbying and election costs are much more complicated than term limits could

For Paragraph 5, use Section 7 for choice of option, compromise or alternative and Section 8 for your reasoning.

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o get

Sample Essay/Written Response on the Topic of Term Limits for Congress*

PARAGRAPH 1: The Issue (STEP 1) and Important Information (STEP 3)

An important issue in our country today is whether or not to impose term limits for members of Congress. To consider this, we need to know that at present, representatives to Congress are elected for terms of two years each, and Senators for six years. The Founding Fathers wrote terms for Congress and the President into the Constitution. However, the Constitution can be amended and has 25 amendments. As a result of the 22nd amendment, Presidents are now limited to two terms. It is also important to define "lobbyist" because lobbyists are people paid to influence lawmakers to vote in certain ways. Therefore, lobbyists could have an impact on this issue.

PARAGRAPH 2: Option A (Step 2) Reasons (Step 4) and Ranks (Step 5)

One option to making a decision about terms limits for Congress is to impose term limits. Reasons to do this include that special interest groups might have less power over members of Congress because they wouldn't have long working relationships with lobbyists. Congress members now spend more time on the job, something founding fathers did not anticipate. Therefore, the Constitution should be changed because times change. New blood is needed in Washington to get fresh ideas on complex issues. In addition, terms limits would save money because less money might be spent on re-elections. A particularly credible reason supporting term limits has to do with giving lobbyists for special interest groups less influence in Washington.

PARAGRAPH 3: Option B (Step 2) Reasons (Step 4) and Ranks (Step 5)

Another option in making a decision about term limits for Congress is to have no term limits. One reason to support this option is that special interest groups and their lobbyists might have even more power because new members are inexperienced and need the donations from special interest groups. Changing term limits would mean changing the Constitution, since the founding fathers did not want term limits. In addition, experienced members of Congress are valuable because they provide "historical memory" for complex issues. Furthermore, term limits for governors and the presidency have not solved the problem of the money spent on campaigns.

PARAGRAPH 4: Compromises and Alternatives (Step 6)

This is a very complex situation. Therefore, I see very few ways to compromise or to offer alternatives.

PARAGRAPH 5: Decision (Step 7) and Reasons (Step 8)

In conclusion, it seems as if we need to continue the way we are at this time by having no term limits for members of Congress. Issues and problems are much more complicated than term limits would solve. For example, lobbyists and money from special interest groups are likely to continue being a problem regardless of the terms. Furthermore, terms limits for governors and the presidency have not solved the problem.

Stem Prompts for Essay

Paragraph 1. An issue of interest (Step 1) is
Important information (Step 3) about this issue is that
Paragraph 2. One option (Step 2 – Option A) in response to this issue is to
Reasons to support this option (Step 4 - Option A) include the following:
Among these reasons (Step 5 - Option A), the following support this option best:
Paragraph 3. Another option (Step 2 - Option B) in response to this issue is to
Reasons to support this option (Step 4 - Option B) include the following:
Among these reasons (Step 5 - Option B), the following support this option best:
Paragraph 4. Compromises or alternatives (Step 6) to these options include:
Reasons to support this choice include the following:
Paragraph 5. In conclusion, the best response to this issue is to (Step 7)
This is the best response because of the following reasons (Step 8)
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Explore Topics



https://www.procon.org/

Rank KEY =

Name:	Date:0	Class:	Topic:	
1. Decide the issue Usin	g Cell Phones in the Classroom			
3. Create important Information	2. <u>E</u> nter Option A		2. <u>E</u> nter Option B	
	4. Identify reasons for option A	5. <u>S</u> et Rank	4. <u>I</u> dentify reasons for option B •	5. <u>S</u> et Rank
6. <u>Identify compromises</u>	/alternatives			
7. Offer a decision				
•••				
8. Name reasons for the	decision			

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