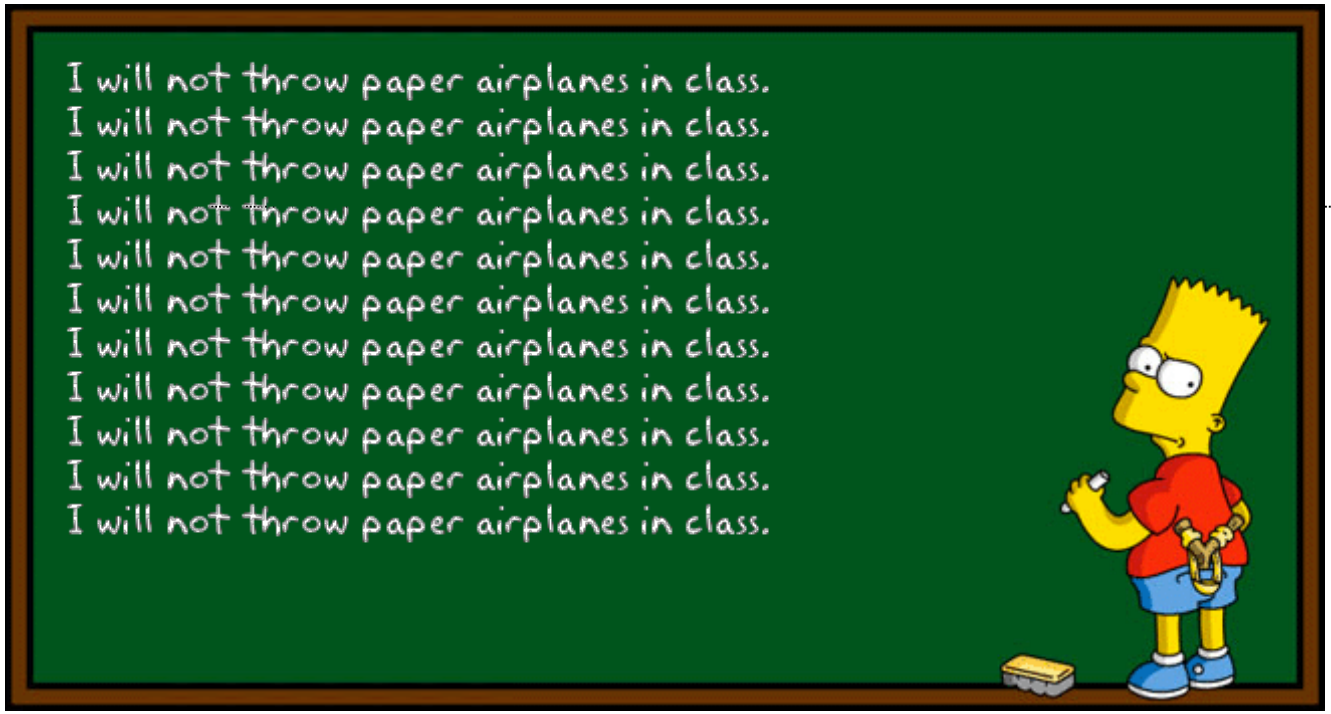
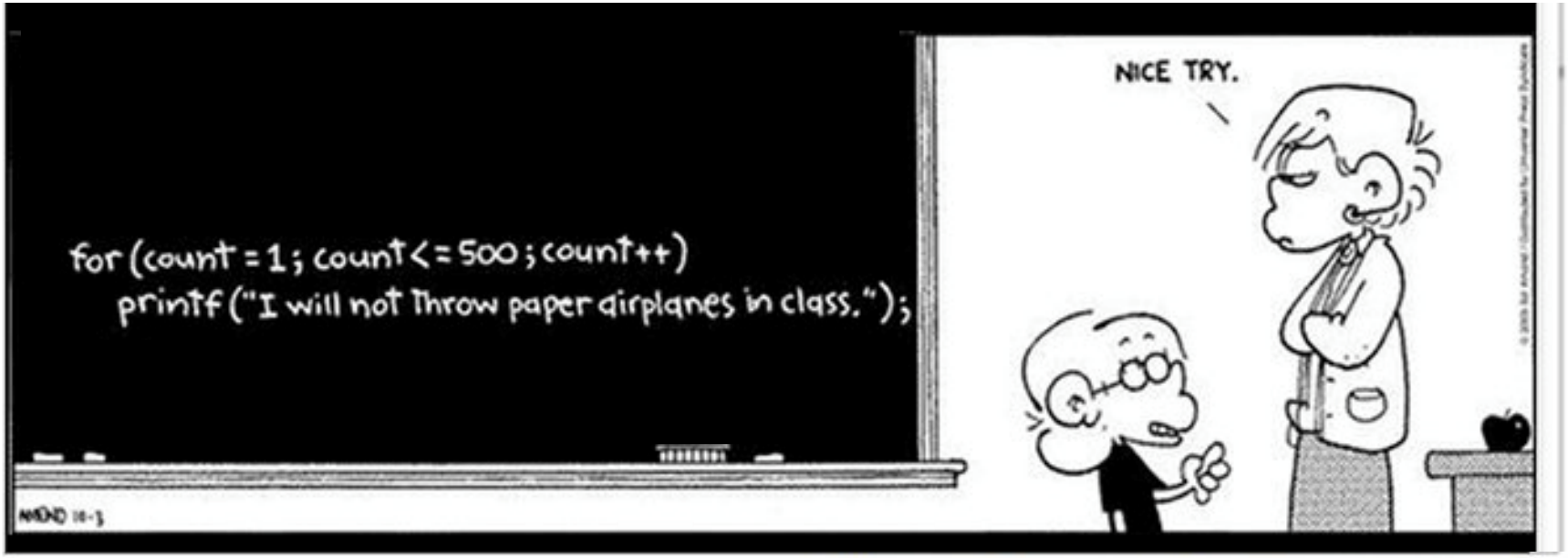
Bewertung von Programmierprojekten





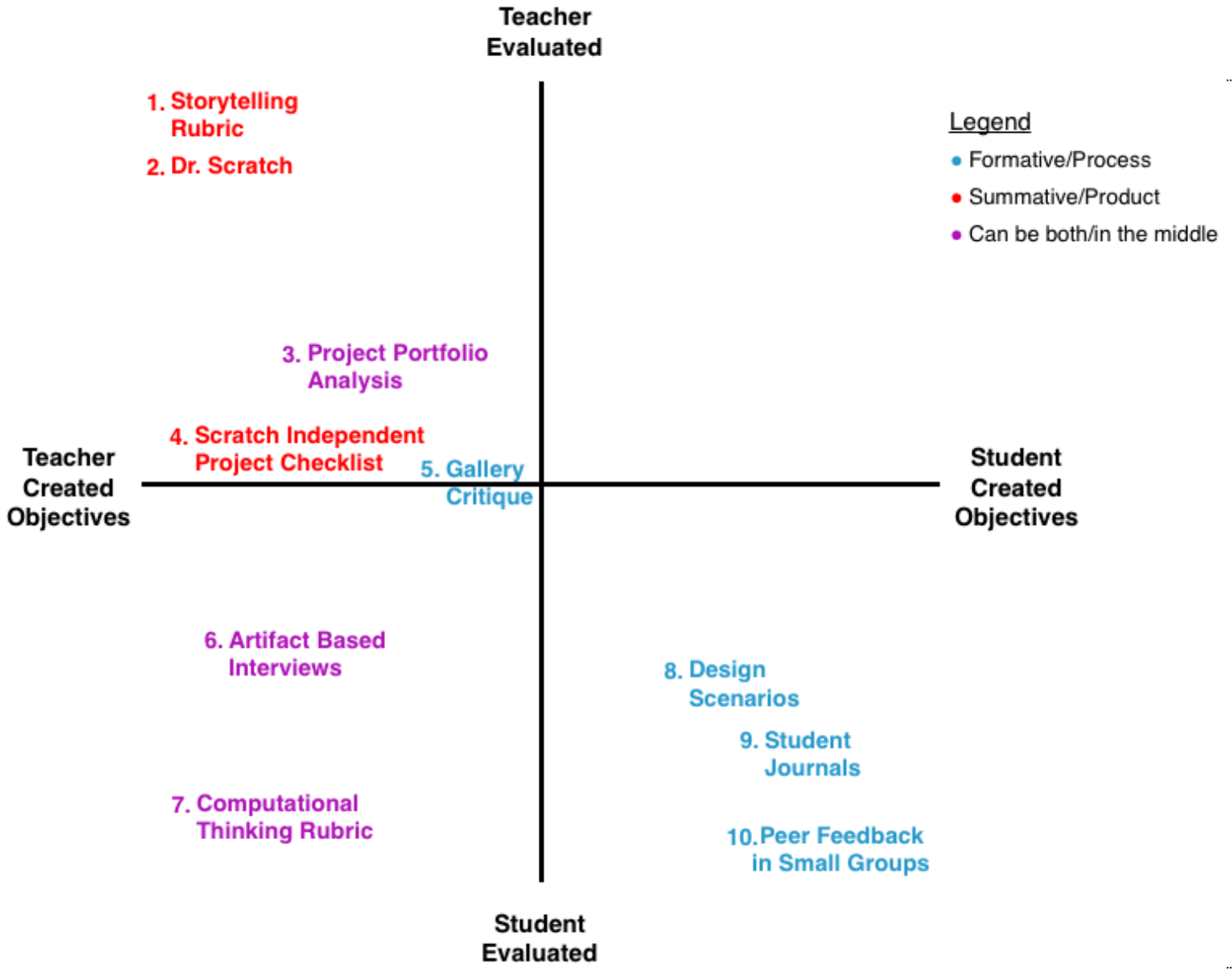
http://www.flickr.com/photos/5hourdeveloper/5869873617/

„... most concept-oriented assessments (e.g., checking for the presence of particular blocks in a projects as indicators of concept fluency, quizzes about definitions of concepts) were insufficient ...“

Ungeeignet sind Fragen wie:

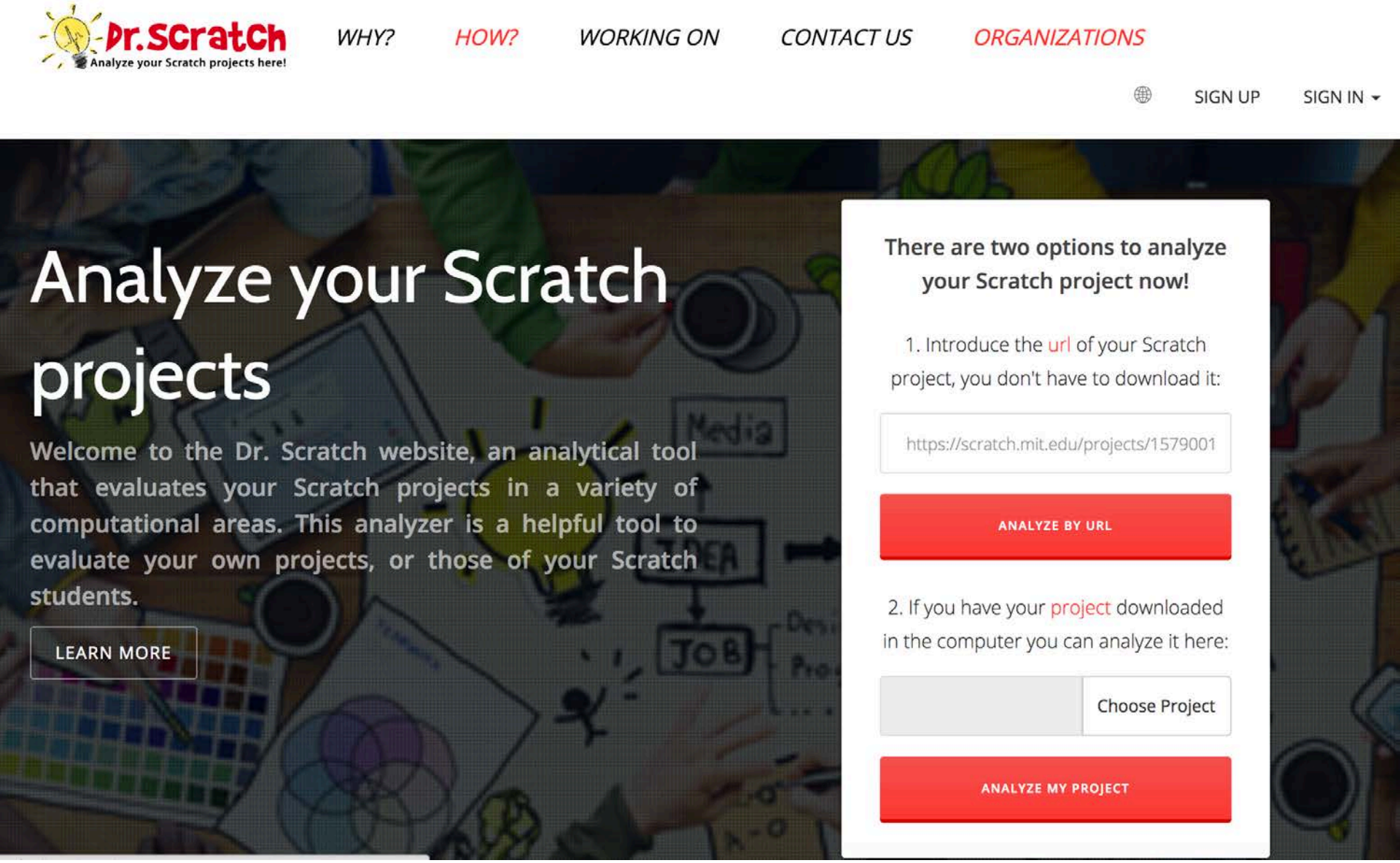
- Was macht der Block XY – beschreibe seine Funktion
- Wo befindet sich die Funktion XY in Scratch
- Multiple Choice Prüfungen ☺

BEWERTUNG VON SCRATCH PROJEKTEN



http://scratched.gse.harvard.edu/resources/beyond-rubric-methods-assessing-scratch-projects

http://www.drscratch.org/



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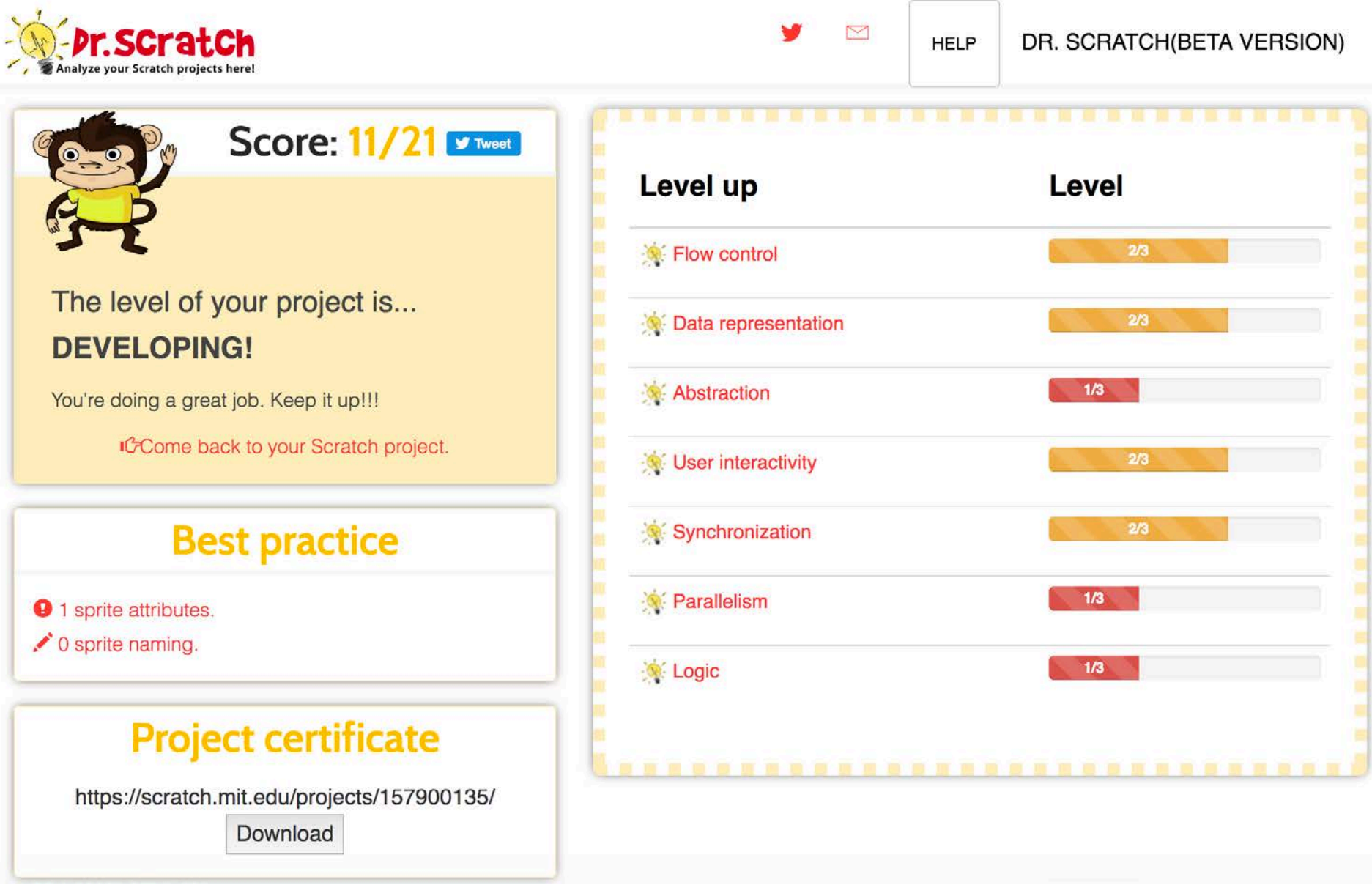
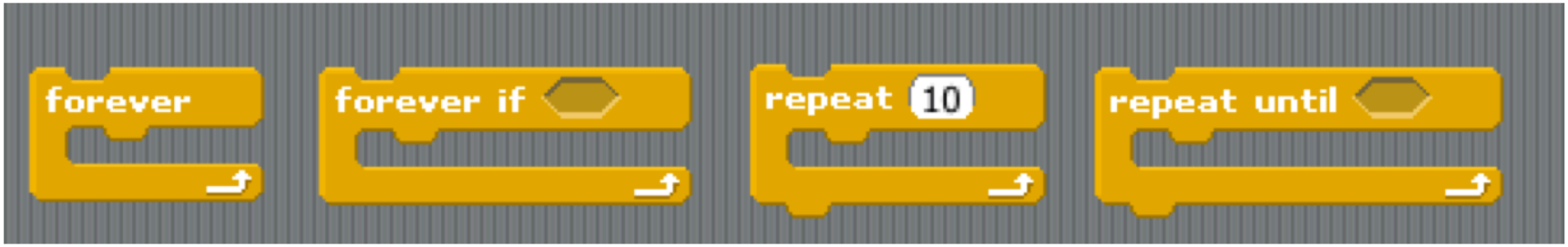


http://www.drscratch.org/

Scratch - Independent Project Checklist

http://scratched.gse.harvard.edu/resources/independent-project-assignment

1. **Sprites**: Your project must include at least 2 sprites. At least one of them must be your original drawing.
2. **Costumes**: The sprite you draw by hand must have at least 3 costumes that appear throughout the project.
3. **Stage**: You must use a stage. It may be drawn by hand or imported.
4. **Motion**: At least one of the sprites must move at some point in the project, using the (x,y) coordinate system to direct its motion.
5. **Loops**: Your project must use at least one loop, created using one of the blocks shown below.



6. **Broadcasting & Receiving Messages:** The stage or one of the sprites must broadcast at least one message, which must be received by another object, causing it to do something. Use the following blocks to do this.

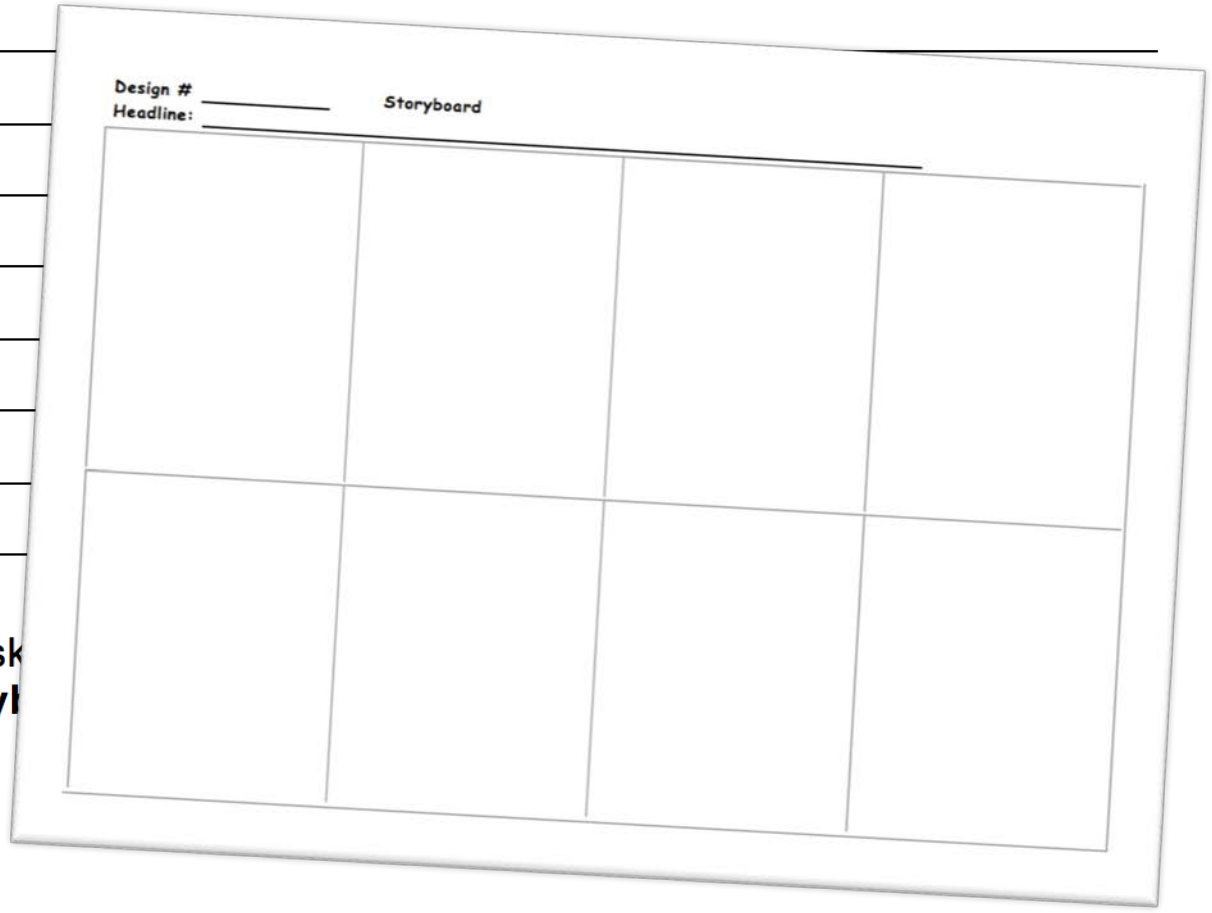
Scratch - Independent Project Checklist

http://scratched.gse.harvard.edu/resources/independent-project-assignment

Project Design, part 2

Summary: What is the overall purpose of the program, story that it tells, or experience that it provides? Describe what you will make in 1-3 sentences that "pitch" your idea to the user, convincing him or her to try it!

User Experience: Storyboard (sk
with this program. **Use the storyl**

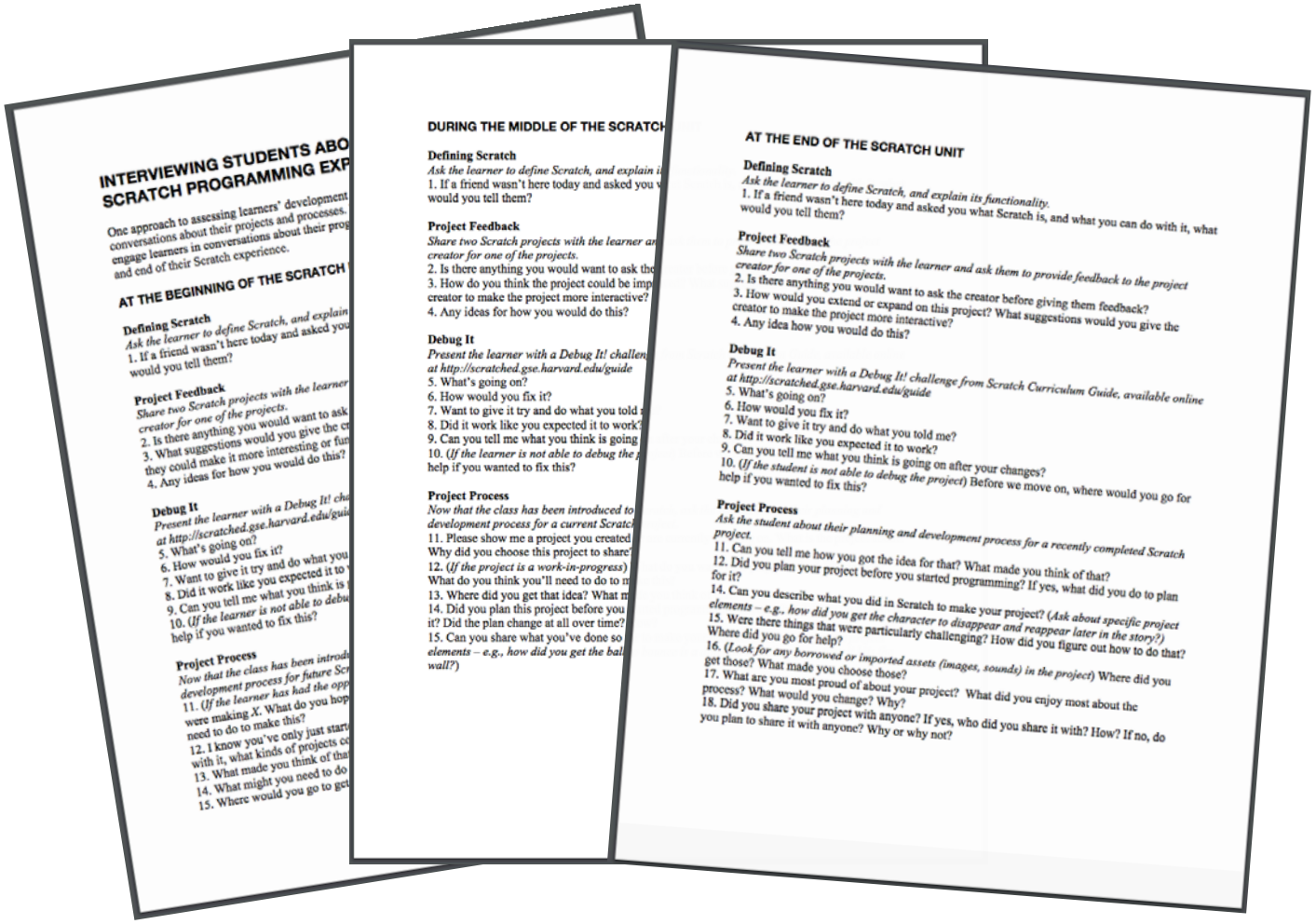


Scratch - Independent Project Checklist

http://scratched.gse.harvard.edu/resources/independent-project-assignment

Criterion	5-6	3-4	1-2	0
Plan	The student(s) produce a plan that describes in detail the project they plan to create. The student has thought through how to accomplish this in Scratch, including specific blocks and logic that may be used.	The student(s) produce a plan that describes the project, and mentions some ideas for how to do this in Scratch.	The student(s) produce a plan that includes some details of the project, and/or some ideas about how to do this in Scratch.	The student does not reach a standard described by any of the descriptors for levels 1-6.
Create	The student(s) demonstrate sophisticated knowledge of Scratch by completing the project to meet ALL of the design specifications successfully. The project is creative & interesting for the user and all the parts fit together to make a meaningful whole. Programming tools are used in sophisticated ways. The student(s) compare the final project to the original plan and justify any changes to the plan.	The student(s) demonstrate knowledge of Scratch by completing the project to meet MOST of the design specifications successfully. The student(s) compare the final project to the plan and describe any changes to the plan.	The student(s) show partial knowledge of Scratch by attempting to complete the project as outlined in the design specifications. Many features don't work or are missing. The student(s) mention any changes to the original plan.	The student does not reach a standard described by any of the descriptors for levels 1-6.
Evaluate	The student thoughtfully & completely evaluates the process of creating the Scratch project, describes challenges and successes, and discusses ideas for further improvement of the final project.	The student evaluates the process of creating the Scratch project, mentions challenges and/or successes, and mentions ideas for further improvement.	The student partially evaluates the project and/or the process of creating it.	The student does not reach a standard described by any of the descriptors for levels 1-6.
Attitudes	The student consistently displays a satisfactory standard in both: • personal engagement (motivation, independence, general positive attitude) • attitudes towards safety, cooperation, respect for others	The student frequently displays a satisfactory standard in both personal engagement and attitudes towards safety, cooperation, and respect for others.	The student occasionally displays a satisfactory standard in either personal engagement or attitudes towards safety, cooperation, and respect for others.	The student does not reach a standard described by any of the descriptors for levels 1-6.

ARTIFACT-BASED INTERVIEWS – MIT LEITFÄNDEN



INTERVIEWING STUDENTS ABO
SCRATCH PROGRAMMING EXP

One approach to assessing learners' development
conversations about their projects and processes.
engage learners in conversations about their prog
and end of their Scratch experience.

AT THE BEGINNING OF THE SCRATCH

Defining Scratch
Ask the learner to define Scratch, and explain
1. If a friend wasn't here today and asked you
would you tell them?

Project Feedback
Share two Scratch projects with the learner
creator for one of the projects.
2. Is there anything you would want to ask
3. What suggestions would you give the cr
they could make it more interesting or fun
4. Any ideas for how you would do this?

Debug It
Present the learner with a Debug It! cha
at http://scratched.gse.harvard.edu/guid
5. What's going on?
6. How would you fix it?
7. Want to give it try and do what you
8. Did it work like you expected it to w
9. Can you tell me what you think is
10. (*If the learner is not able to debu*
help if you wanted to fix this?

Project Process
Now that the class has been introdu
development process for future Scr
11. (*If the learner has had the opp*
were making *X*. What do you hop
need to do to make this?
12. I know you've only just start
with it, what kinds of projects co
13. What made you think of tha
14. What might you need to do
15. Where would you go to get

DURING THE MIDDLE OF THE SCRATCH

Defining Scratch
Ask the learner to define Scratch, and explain i
1. If a friend wasn't here today and asked you
would you tell them?

Project Feedback
Share two Scratch projects with the learner ar
creator for one of the projects.
2. Is there anything you would want to ask the
3. How do you think the project could be imp
creator to make the project more interactive?
4. Any ideas for how you would do this?

Debug It
Present the learner with a Debug It! challen
at http://scratched.gse.harvard.edu/guide
5. What's going on?
6. How would you fix it?
7. Want to give it try and do what you told
8. Did it work like you expected it to work?
9. Can you tell me what you think is going
10. (*If the learner is not able to debug the*
help if you wanted to fix this?

Project Process
Now that the class has been introduced to
development process for a current Scratch
11. Please show me a project you created
Why did you choose this project to share?
12. (*If the project is a work-in-progress*)
What do you think you'll need to do to m
13. Where did you get that idea? What m
14. Did you plan this project before you
it? Did the plan change at all over time?
15. Can you share what you've done so
elements – e.g., how did you get the bal
wall?)

AT THE END OF THE SCRATCH UNIT

Defining Scratch
Ask the learner to define Scratch, and explain its functionality.
1. If a friend wasn't here today and asked you what Scratch is, and what you can do with it, what
would you tell them?

Project Feedback
Share two Scratch projects with the learner and ask them to provide feedback to the project
creator for one of the projects.
2. Is there anything you would want to ask the creator before giving them feedback?
3. How would you extend or expand on this project? What suggestions would you give the
creator to make the project more interactive?
4. Any idea how you would do this?

Debug It
Present the learner with a Debug It! challenge from Scratch Curriculum Guide, available online
at http://scratched.gse.harvard.edu/guide
5. What's going on?
6. How would you fix it?
7. Want to give it try and do what you told me?
8. Did it work like you expected it to work?
9. Can you tell me what you think is going on after your changes?
10. (*If the student is not able to debug the project*) Before we move on, where would you go for
help if you wanted to fix this?

Project Process
Ask the student about their planning and development process for a recently completed Scratch
project.
11. Can you tell me how you got the idea for that? What made you think of that?
12. Did you plan your project before you started programming? If yes, what did you do to plan
for it?
14. Can you describe what you did in Scratch to make your project? (*Ask about specific project*
elements – e.g., how did you get the character to disappear and reappear later in the story?)
15. Were there things that were particularly challenging? How did you figure out how to do that?
Where did you go for help?
16. (*Look for any borrowed or imported assets (images, sounds) in the project*) Where did you
get those? What made you choose those?
17. What are you most proud of about your project? What did you enjoy most about the
process? What would you change? Why?
18. Did you share your project with anyone? If yes, who did you share it with? How? If no, do
you plan to share it with anyone? Why or why not?

http://scratched.gse.harvard.edu/ct/files/Student_Interview_Protocol.pdf

ARTIFACT-BASED INTERVIEWS – MIT LEITFÄDEN

Beispiel aus dem Leitfaden:

Project Feedback
Share two Scratch projects with the learner and ask them to provide feedback to the project creator for one of the projects.
2. Is there anything you would want to ask the creator before giving her feedback?
3. How do you think the project could be improved? What suggestions would you give the creator to make the project more interactive?
4. Any ideas for how you would do this?

Debug It
Present the learner with a Debug It! challenge from Scratch Curriculum Guide, available online at http://scratched.gse.harvard.edu/guide
5. What's going on?
6. How would you fix it?
7. Want to give it try and do what you told me?
8. Did it work like you expected it to work?
9. Can you tell me what you think is going on after your changes?
10. (*If the learner is not able to debug the project*) Before we move on, where would you go for help if you wanted to fix this?

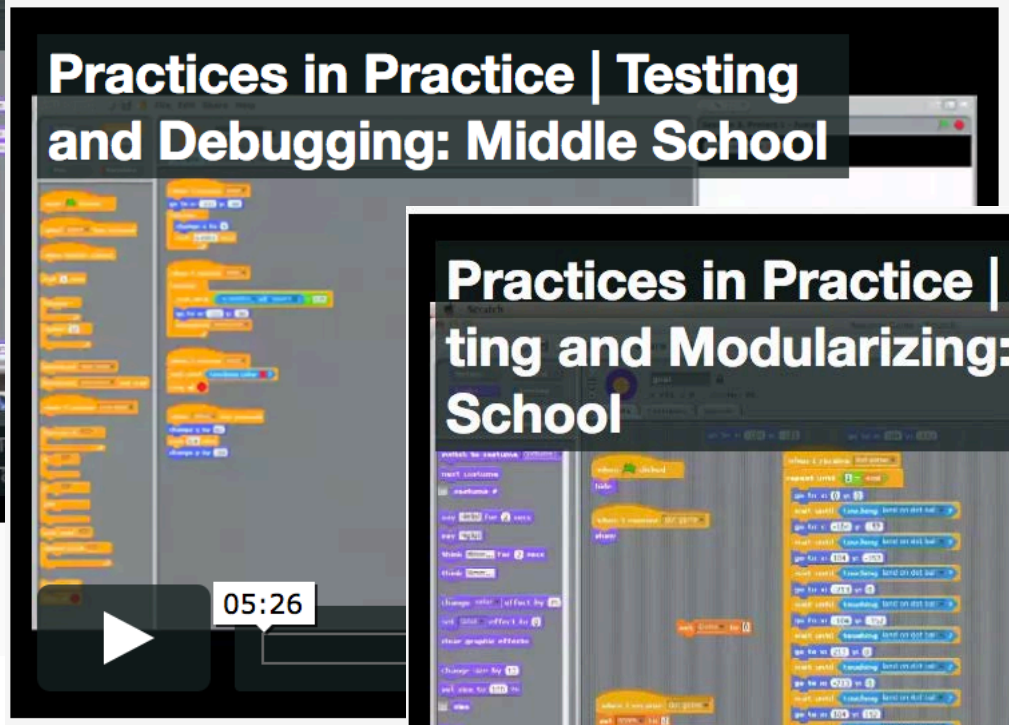
ARTIFACT-BASED INTERVIEWS – KOMPETENZRASTER

Category	Beginning	Developing	Proficient	Exceptional
Content area concepts (Add specific targets as needed)	___ Does not include ideas about the subject area or ideas are incorrect	___ Includes a few ideas about the subject, shows some understanding	___ Focuses on and understands important concepts about the subject matter	___ Makes important connections between subject area concepts, shows in-depth understanding
Project design	___ Did not try to make own artwork ___ No clear purpose of project or organization ___ Does not provide a way for other people to interact with program	___ Project uses artwork of others with some effort to change ___ Has some sense of purpose and structure ___ Includes way for user to interact with program, may need to be clearer or fit program's purpose better	___ Project uses original artwork or reuses imported images creatively ___ Has clear purpose, makes sense, has structure ___ Includes way for user to interact with program and clear instructions	___ Project artwork and creativity significantly support the content ___ Has multiple layers or complex design ___ User interface fits content well, is complex; instructions are well-written and integrated into design
Programming	___ Project shows little understanding of blocks and how they work together ___ Lacks organization and logic ___ Has several bugs	___ Project shows some understanding of blocks and how they work together ___ Has some organization and logic ___ May have a couple bugs	___ Project shows understanding of blocks and how they work together to meet a goal ___ Is organized, logical, and debugged	___ Project shows advanced understanding of blocks and procedures ___ Uses additional programming techniques ___ Is particularly well organized, logical, and debugged
Process	___ Student did not get involved in design process ___ Did not use project time well and did not meet deadlines ___ Did not collaborate	___ Student tried out the design process ___ Used project time well sometimes and met some deadlines ___ Collaborated at times	___ Student used design process (stated problem, came up with ideas, chose solution, built and tested, presented results) ___ Used project time constructively, met deadlines ___ Collaborated appropriately	___ Student made significant use of the design process ___ Used project time constructively, finished early or added additional elements ___ Found ways to collaborate beyond class structure

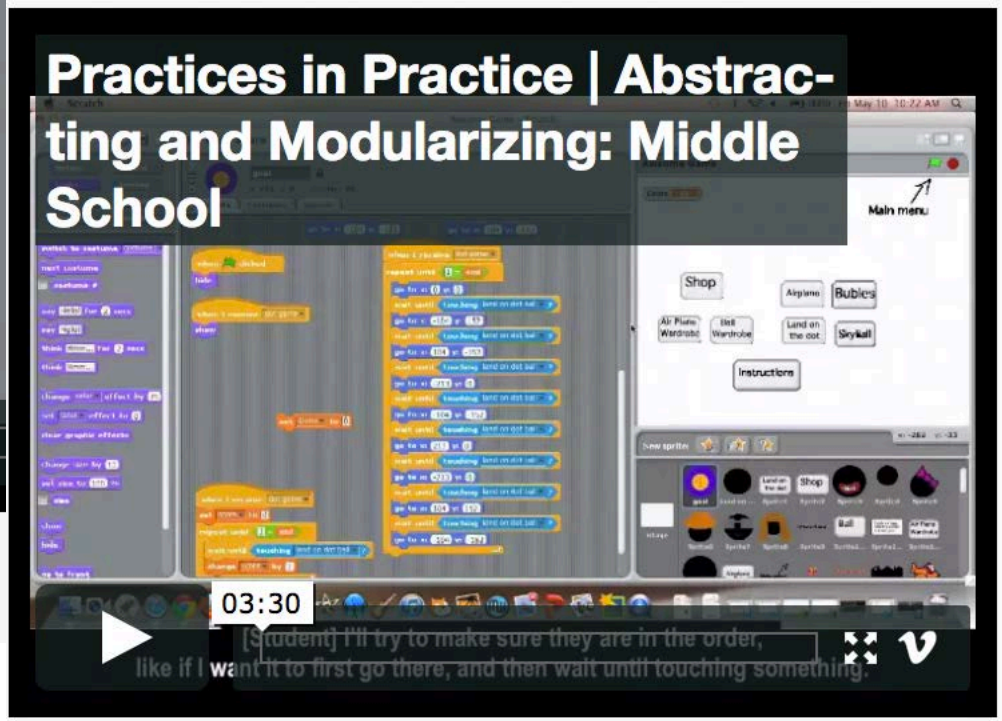
ARTIFACT-BASED INTERVIEWS – VIDEO BEISPIELE

http://scratched.gse.harvard.edu/ct/assessing.html

MIDDLE SCHOOL



MIDDLE SCHOOL



MIDDLE SCHOOL

DESIGN SCENARIOS

- Die Lernenden bekommen ein Scratch Projekt präsentiert und müssen in 4 Bereichen etwas tun:
- (1) zu erklären, was das ausgewählte Projekt tut,
- (2) beschreibt, wie es erweitert werden könnte,
- (3) einen Fehler beheben und
- (4) Hinzufügen einer neuen Funktion.

Anleitung

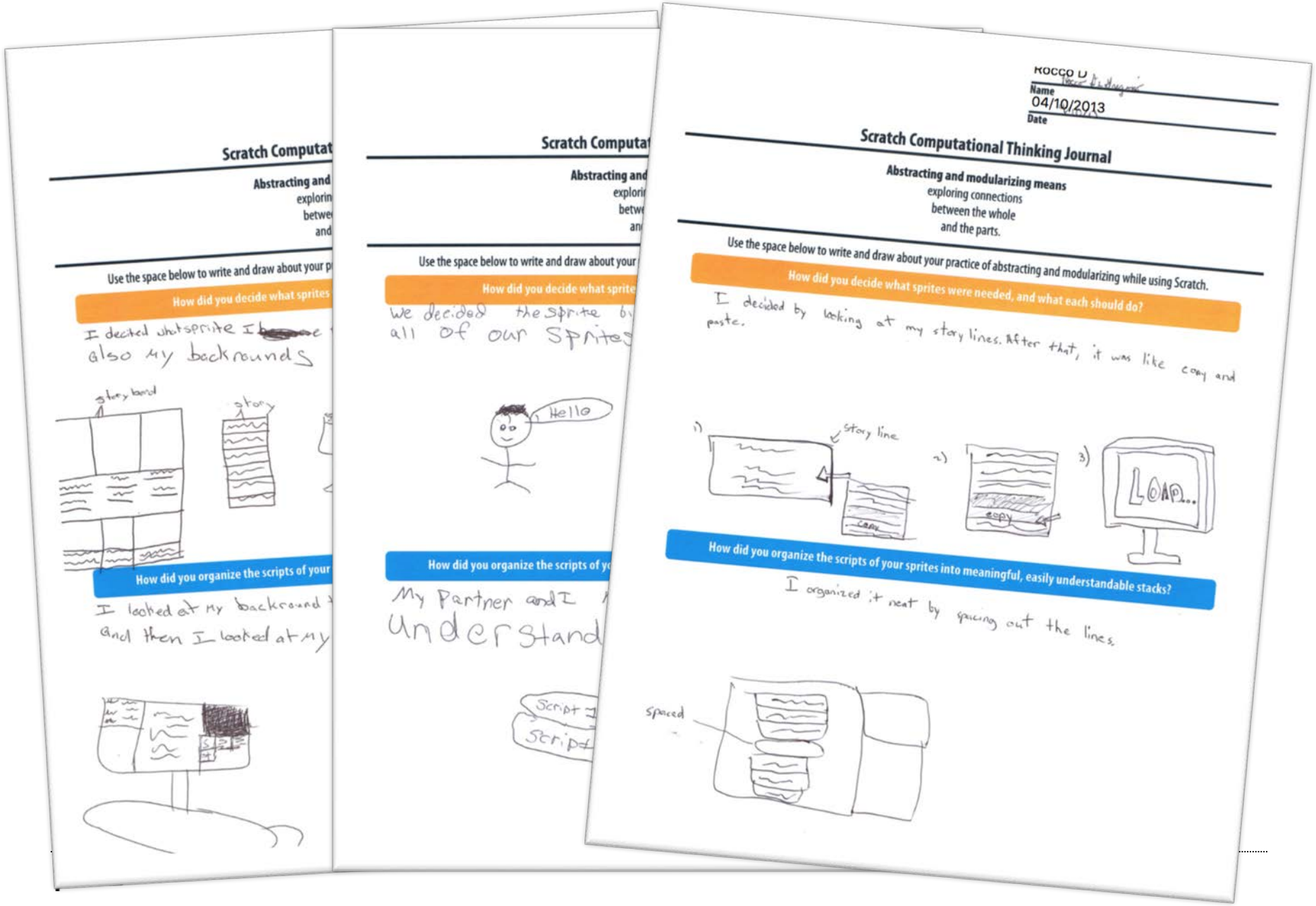
In the Name project, Dean (the project creator) has designed an animated project that features his name. How could we extend this project? Dean wants the N to appear after the A, not at the same time. What is the bug? How do we fix the bug? Dean wants the N to do something interesting (like the other letters), but only when the N is clicked. How do we add this feature?

Anmerkungen und Danksagungen

Part of a computational thinking assessment strategy.
http://scratched.gse.harvard.edu/ct/

https://scratch.mit.edu/studios/573426/

LERNTAGEBUCH



Scratch Computat

Abstracting and
explorin
betwe
and

Use the space below to write and draw about your p

How did you decide what sprites

I decited whatsprite I
also my backrounds

story board

story

How did you organize the scripts of your

I looked at my backround
and then I looked at my

Scratch Computat

Abstracting and
explori
betwe
an

Use the space below to write and draw about your

How did you decide what sprite

we decided the sprite
all of our Sprites

Hello

How did you organize the scripts of y

My partner and I
Understand

Script
Script

Name
ROCCO D
04/10/2013
Date

Scratch Computational Thinking Journal

Abstracting and modularizing means
exploring connections
between the whole
and the parts.

Use the space below to write and draw about your practice of abstracting and modularizing while using Scratch.

How did you decide what sprites were needed, and what each should do?

I decided by looking at my story lines. After that, it was like copy and paste.

1) story line
2) copy
3) LOAD...

How did you organize the scripts of your sprites into meaningful, easily understandable stacks?

I organized it neat by spacing out the lines.

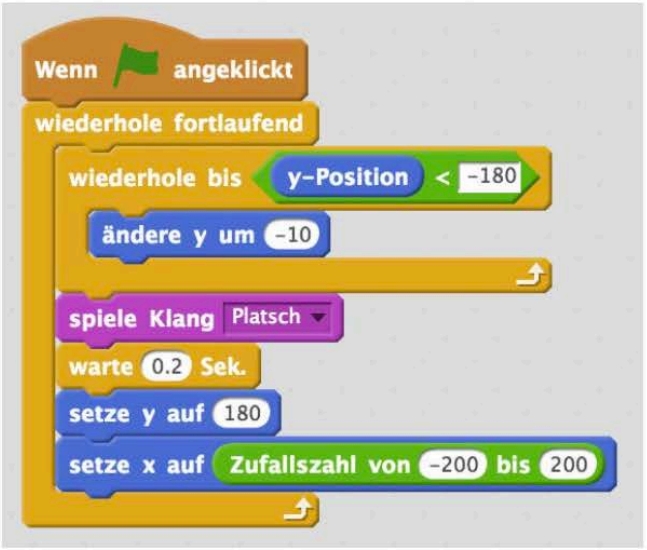
spaced

Programme lesen und interpretieren

Tom hat ein Spiel mit Scratch gebaut, bei dem der Spieler einem Regentropfen ausweichen muss, der vom Himmel fällt. Nachdem der Regentropfen platschend am Boden aufgeschlagen ist, erscheint er immer wieder zufällig an einer anderen Stelle am Himmel und fällt erneut herunter. Welches der folgenden Programme hat Tom für den Regentropfen gebaut?

☐

☐



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