A. Curriculum concept learning

○ **Initialized** with DSL and executor.

▢ **Lesson1**: Object-based questions.

Q: What is the <u>shape</u> of the <u>red</u> object?
A: Cube.

▢ **Lesson2**: Relational questions.

Q: How many <u>cubes</u> are <u>behind</u> the <u>sphere</u>?
A: 3

▢ **Lesson3**: More complex questions.

Q: Does the red object left of the green cube have the same shape as the purple matte thing?
A: No

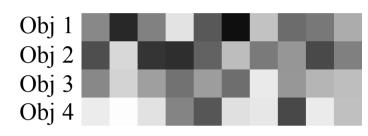▢ **Deploy**: complex scenes, complex questions

Q: Does the matte thing behind the big sphere have the same color as the cylinder left of the small matte cube?
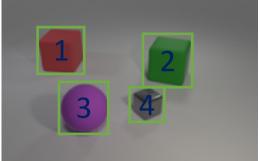A: No.

B. Illustrative execution of NS-CL

Q: Does the <u>red</u> object <u>left</u> of the <u>green cube</u> have the same <u>shape</u> as the <u>purple matte</u> thing?

Step1: Visual Parsing

Obj 1
Obj 2
Obj 3
Obj 4

Step2, 3: Semantic Parsing and Program Execution

○ Program | Representations | Concepts | Outputs

Filter		Green Cube	
Relate	Object 2	Left	
Filter		Red	
Filter		Purple Matte	
AEQuery	Object 1 Object 3	Shape	No (0.98)