North Dakota 2023 P-12 STEM Needs Assessment

UND Bureau for Evaluation and Research Services

Initiative for Rural Education, Equity, and Economic Development (I-REEED)

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Funded by:

North Dakota Established Program to Stimulate Competitive Research
(ND EPSCoR)

Executive Summary

This report describes the results of a statewide survey of North Dakota P-12 teachers and administrators about their STEM teaching experiences and needs. The survey, conducted in May of 2023, garnered responses from 1,078 educators.

Key findings of this study include:

- Educators report that financial assistance for materials and supplies, as well as online curriculum or lesson plan resources, would increase educators' effectiveness at STEM teaching.
- The strategy that educators would most like to see developed regarding professional development is for schools or districts to pay for STEM resources and make them available.
- Educators would like to see STEM activities developed that bring students into contact with "real" STEM, such as field trips and visits from scientists.
- When preparing to teach STEM topics, teachers reported that they often use materials they independently identify, sometimes use material shared by a colleague in the same school or district, and never use resources shared by a colleague in a different school or district.
- When they use instructional materials available online, teachers report often using results of a search engine, sometimes using government agency websites, and never using online science curricula.
- Teachers reported rarely using resources like textbooks, commercial curricula, or professional organization magazines.
- Overall, educators are excited to develop STEM in their schools and districts.

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Methods

The 2023 North Dakota EPSCoR STEM Needs Assessment was conducted by researchers in the College of Education and Human Development at the University of North Dakota.

Survey Development
Researchers developed a survey with the primary goal of understanding what trainings, resources, and activities North Dakota researchers are using *currently*, and which they would *like to see developed*. Questions were both developed specifically for this survey and drawn from previous STEM needs assessments or other surveys conducted by the researchers. Several rounds of revision were completed to ensure that the survey was clear, relevant, and of an appropriate length.

Recruitment and Data Collection
Researchers conducted recruitment and data collection online, using email and the Qualtrics platform. To recruit participants, researchers obtained lists of North Dakota administrator and teacher emails from the state Department of Public Instruction (NDDPI). All P-12 administrators and teachers listed by NDDPI were included in the sampling frame. To ensure that emails would be sent at approximately the same time, researchers created a listserv of the email addresses. On May 3, 2023, the first recruitment email was sent. The email invited educators to participate, linked to the Qualtrics survey, and informed potential participants that the first 100 administrators and 300 teachers would receive $25 Amazon gift cards. A follow-up email was sent on May 9.

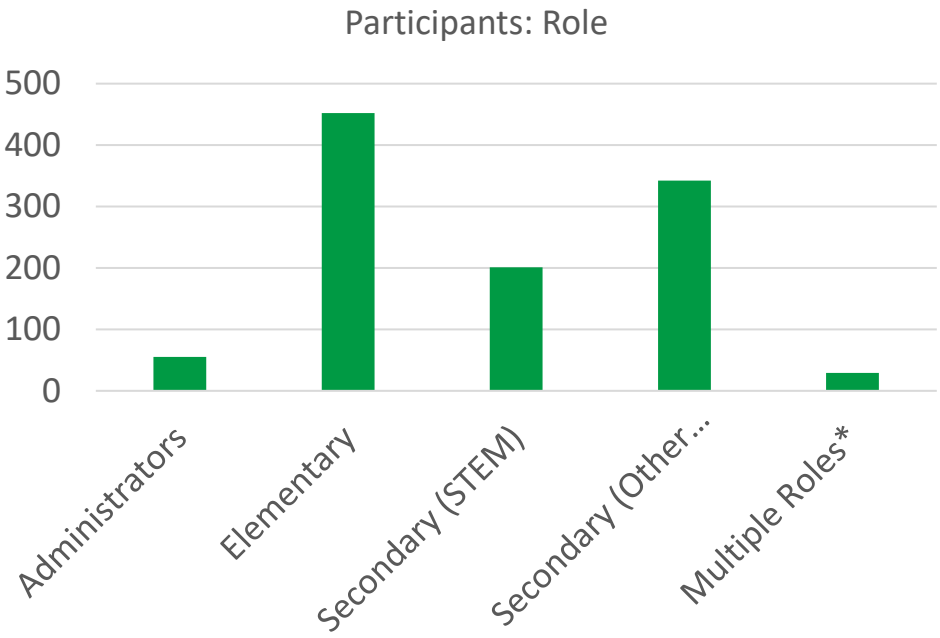
Approximately 10,480 emails were included in the distribution list. When the initial number was sent, approximately 424 were returned as undeliverable. Of the approximately 10,056 educators effectively recruited, 1,078 fully completed the survey.

Data Analysis
Once collected, researchers cleaned the data set by removing incomplete responses. Descriptive statistics were calculated and charts generated using Excel. Researchers also conducted qualitative analysis of text answers. The findings of this analysis are presented in this report.

Participants

Total number of participants: 1,079

Question: Please indicate your position(s).

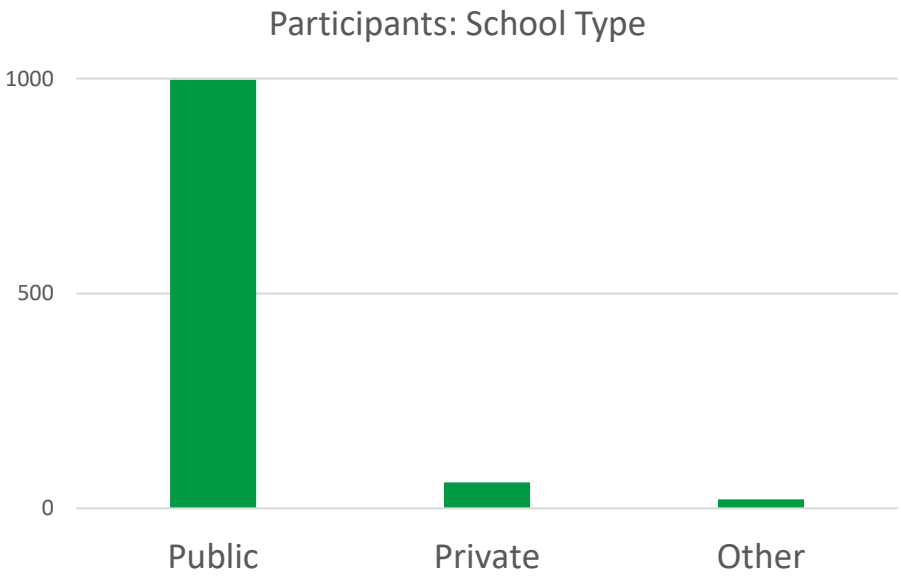


Participants: Role

Administrators	55
Elementary	452
Secondary (STEM)	201
Secondary (Other subjects)	342
Multiple Roles*	29

*For analysis purposes, those who identified multiple roles were counted with the grade level(s) identified

Question: What type of school do you work in?



Participants: School Type

Public	997
Private	60
Other	21

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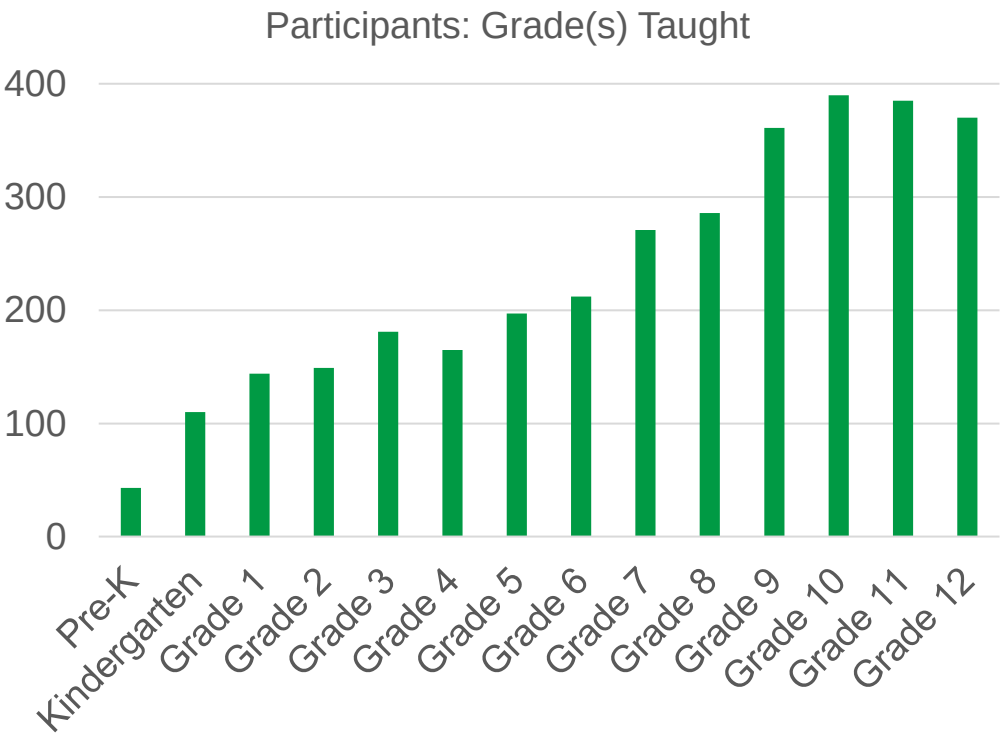
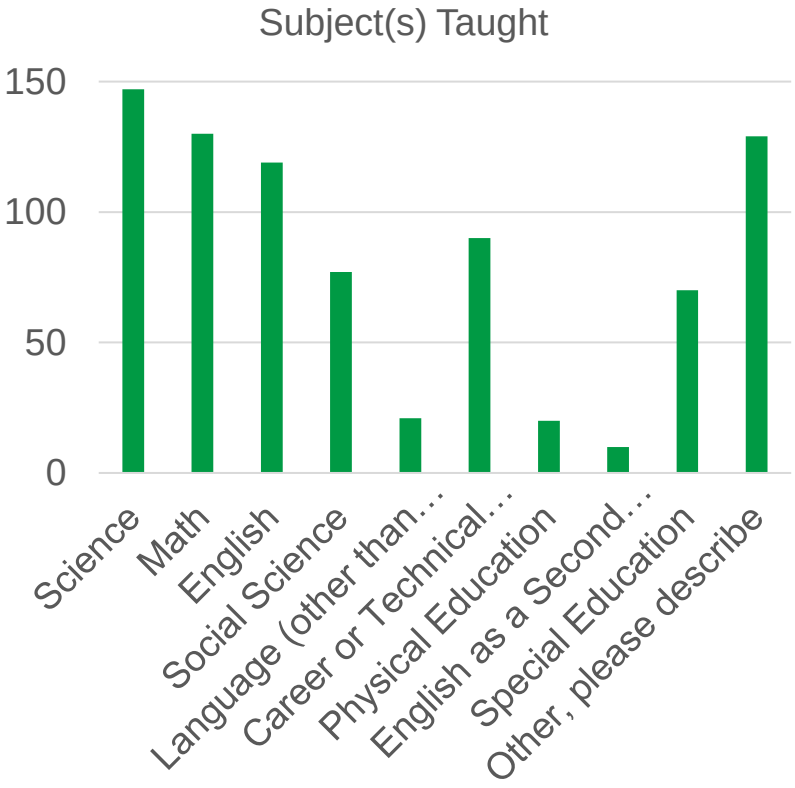
Question: What grade(s) do you teach? (Question was only asked of participants who identified themselves as teachers.)



Participants: Grade(s) Taught	
Pre-K	43
Kindergarten	110
Grade 1	144
Grade 2	149
Grade 3	181
Grade 4	165
Grade 5	197
Grade 6	212
Grade 7	271
Grade 8	286
Grade 9	361
Grade 10	390
Grade 11	385
Grade 12	370

Question: What subject(s) are you teaching this academic year? (Question was only asked of participants who identified themselves as secondary teachers.)



Participants: Subject(s) Taught	
Science	147
Math	130
English	119
Social Science	77
Language (other than English)	21
Career or Technical Education	90
Physical Education	20
English as a Second Language	10
Special Education	70
Other, please describe	129

Other subjects taught included the arts (music, visual arts, etc.), business, family and consumer sciences, health, and others.

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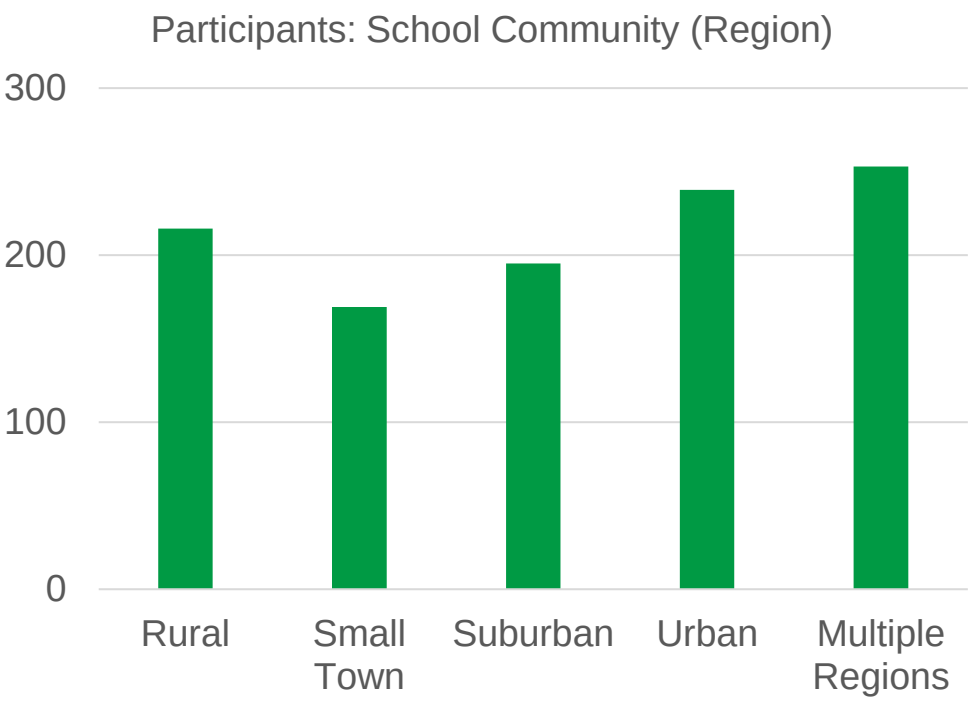
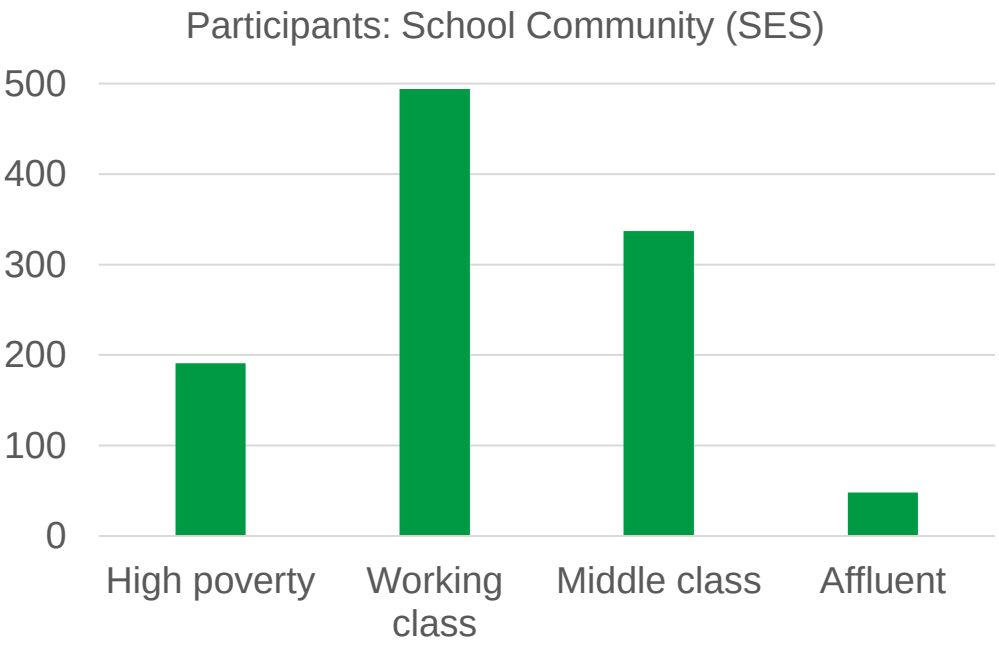
Question: How would you describe the type of community your school serves? Mark all that apply. (If you are a district-level administrator, please answer for your district.)



Participants: School Community (Region)	
Rural	216
Small Town	169
Suburban	195
Urban	239
Multiple Regions	253

Question: To the best of your knowledge, how would you describe the average socio-economic status of the community your school serves? (If you are a district-level administrator, please answer for your district)



Participants: School Community (SES)	
High poverty	191
Working class	494
Middle class	337
Affluent	48

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Resources to Increase Effectiveness

Administrators: What resources would increase the effectiveness of teachers at your school to teach or incorporate Science/STEM in their classrooms? (Select up to 3 responses)

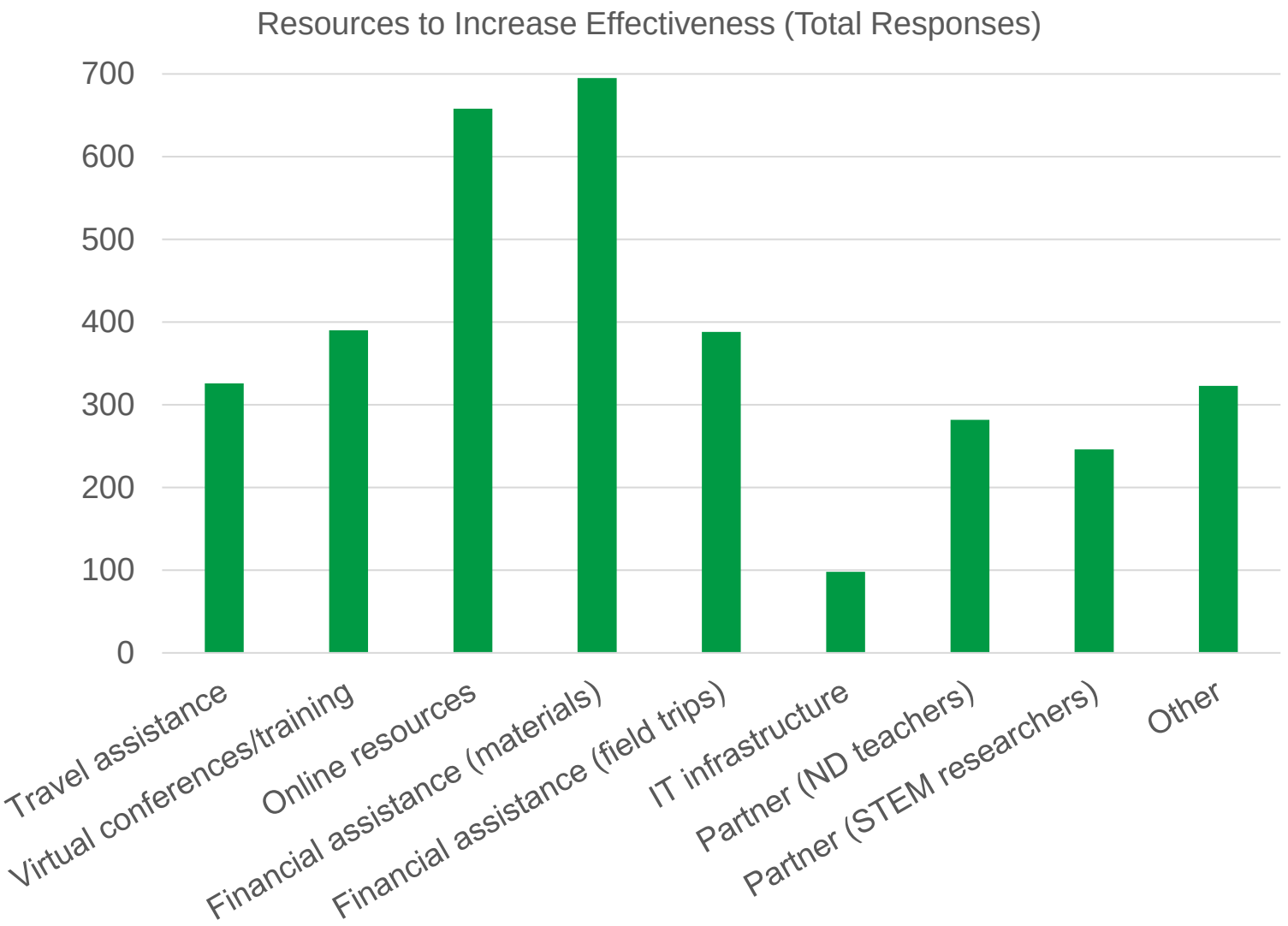
Elementary Teachers: What resources would increase the ability of elementary teachers to incorporate Science/STEM in their classrooms? (Select up to 3 responses)

Secondary Teachers (STEM): What resources would increase the effectiveness of secondary Science/STEM teachers? (Select up to 3 responses)

Secondary Teachers (Non-STEM): What resources would increase the ability of secondary school teachers to incorporate Science/STEM into their curriculum? (Select up to 3 responses)

Resources to Increase Effectiveness

	Admin	Elem	STEM	Other Subj.	Total
Travel assistance for conferences/training	29	102	92	103	326
Virtual options for attending conferences/training	31	160	65	134	390
Online curriculum/lesson plan resources	37	309	120	192	658
Financial assistance for equipment and supplies	36	315	149	195	695
Financial assistance for field trips	15	201	74	98	388
Improved IT infrastructure	6	28	18	46	98
Opportunities to partner with other ND teachers	11	73	116	82	282
Opportunities to partner with STEM researchers	8	95	77	66	246
Other	11	99	116	97	323



Summary: The two most commonly indicated resources educators believed would increase effectiveness in STEM teaching were financial assistance for classroom equipment/supplies and online curriculum/lesson plan resources. The least commonly indicated resource they identified was improved IT infrastructure.

Professional Development

Question 1: Current Professional Development

Please select the STEM professional development strategies that your school is currently using. (If you are a district-level administrator, please answer for your district)

Question 2: Preferred Professional Development

Please select the STEM professional development strategies that you would like to see developed or enhanced in your school. (Select up to 3 responses) (If you are a district-level administrator, please answer for your district)

Question 1: Current Professional Development

	Admin.	Elem.	STEM	Other Subj.	Total	
Teachers/staff are encouraged to attend STEM PD	38	173	100	176	487	**1**
Interested teachers/staff are sent to STEM PD opportunities at school/district expense	29	98	49	111	287	**3**
School/district pays for STEM resources and makes them accessible	33	149	76	104	362	**2**
School/district actively recruits STEM teachers	5	23	13	39	80	
School/district promotes STEM credentialing programs	8	41	16	50	115	
Other	3	80	40	42	165	

Question 2: Preferred Professional Development

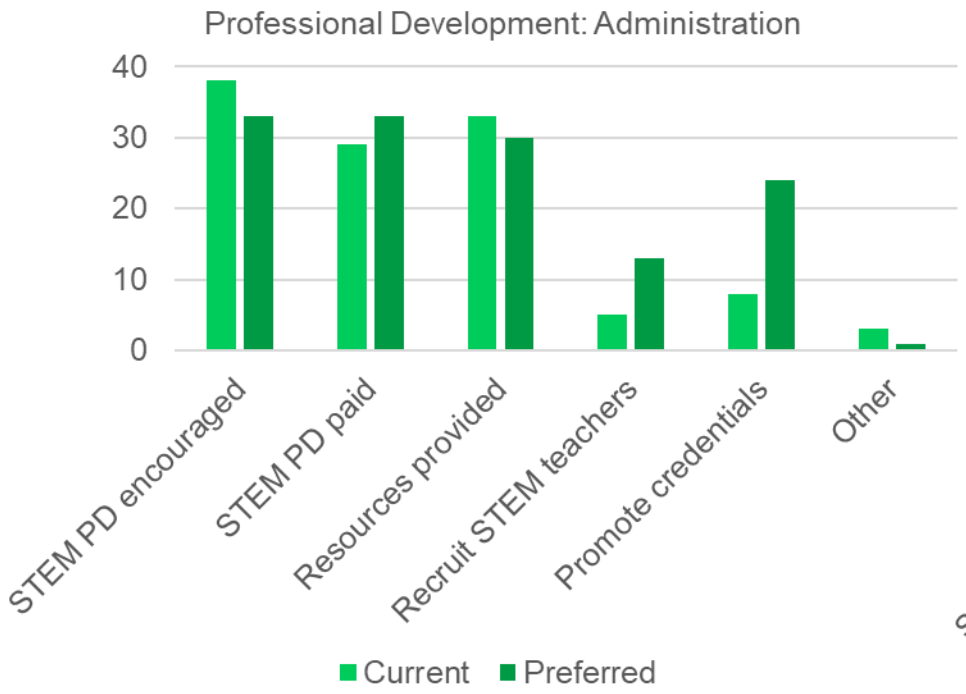
	Admin.	Elem.	STEM	Other Subj.	Total	
Teachers/staff are encouraged to attend STEM PD	33	201	104	147	485	**3**
Interested teachers/staff are sent to STEM PD opportunities at school/district expense	33	286	154	201	674	**2**
School/district pays for STEM resources and makes them accessible	30	334	150	211	725	**1**
School/district actively recruits STEM teachers	13	84	45	57	199	
School/district promotes STEM credentialing programs	24	137	78	102	341	
Other	1	15	4	14	34	

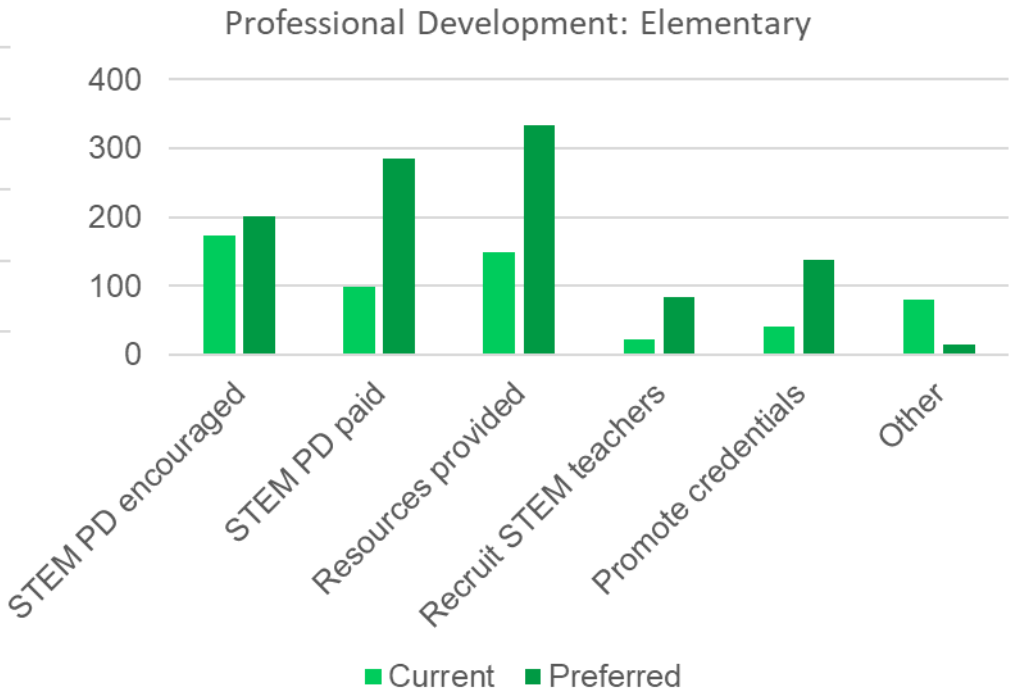
Other Responses: Only a few other PD strategies were identified in the "other" section. These strategies included:

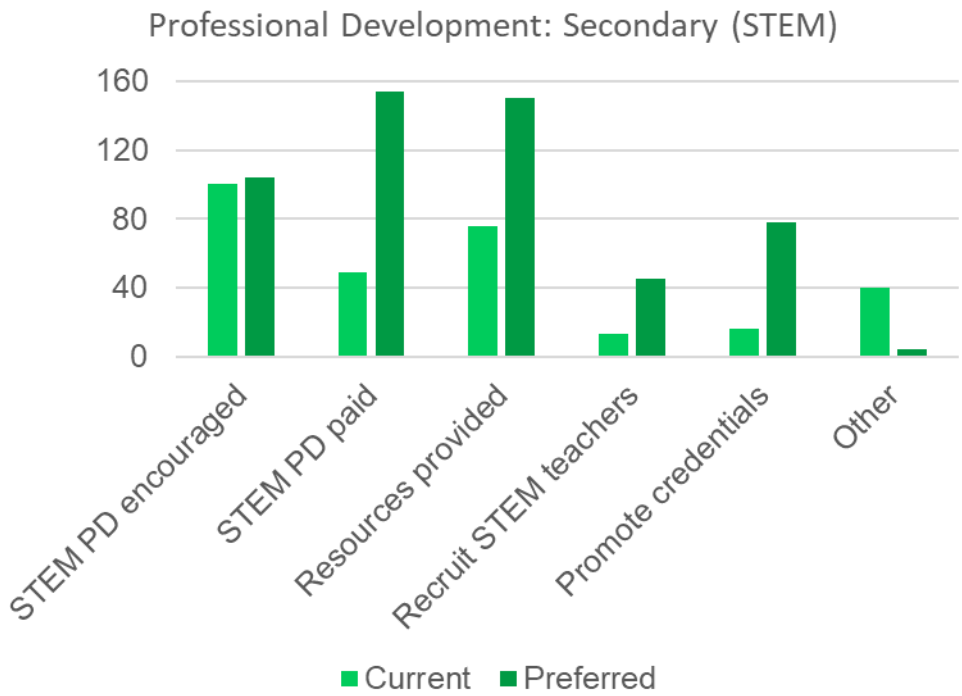
- Using existing meetings/trainings for occasional STEM development ("a few grade level meetings were used to 'train'")
- Making teachers aware of opportunities ("Opportunities are emailed to us that are available")
- Allowing teachers to pursue STEM PD opportunities as they want to or are able ("Staff gets to pick what PD we pick. There is no incentive or suggestions.")

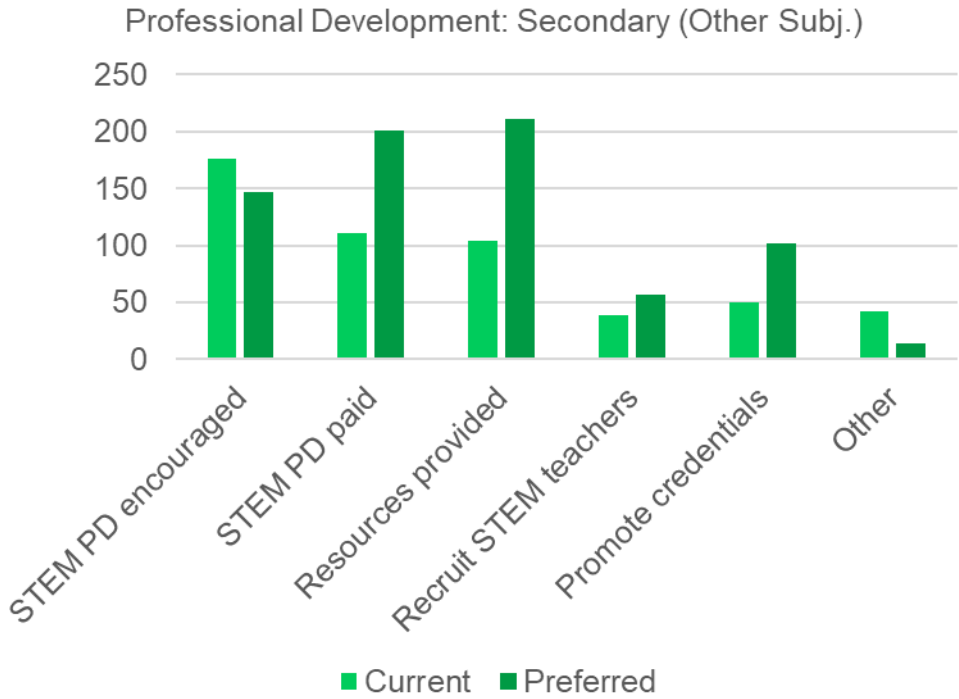
Participants also used the "other" response option to identify what they saw as limitations in their school's/district's STEM PD strategies, such as:

- "We have had STEM training in the past, but it has kind of gone out the window."
- "STEM is not promoted, moving to a more liberal arts centered approach"
- "The school has PD for STEM teachers, but not for STEAM. I would love to see STEAM brought to the forefront!"
- "district pays for nothing…"









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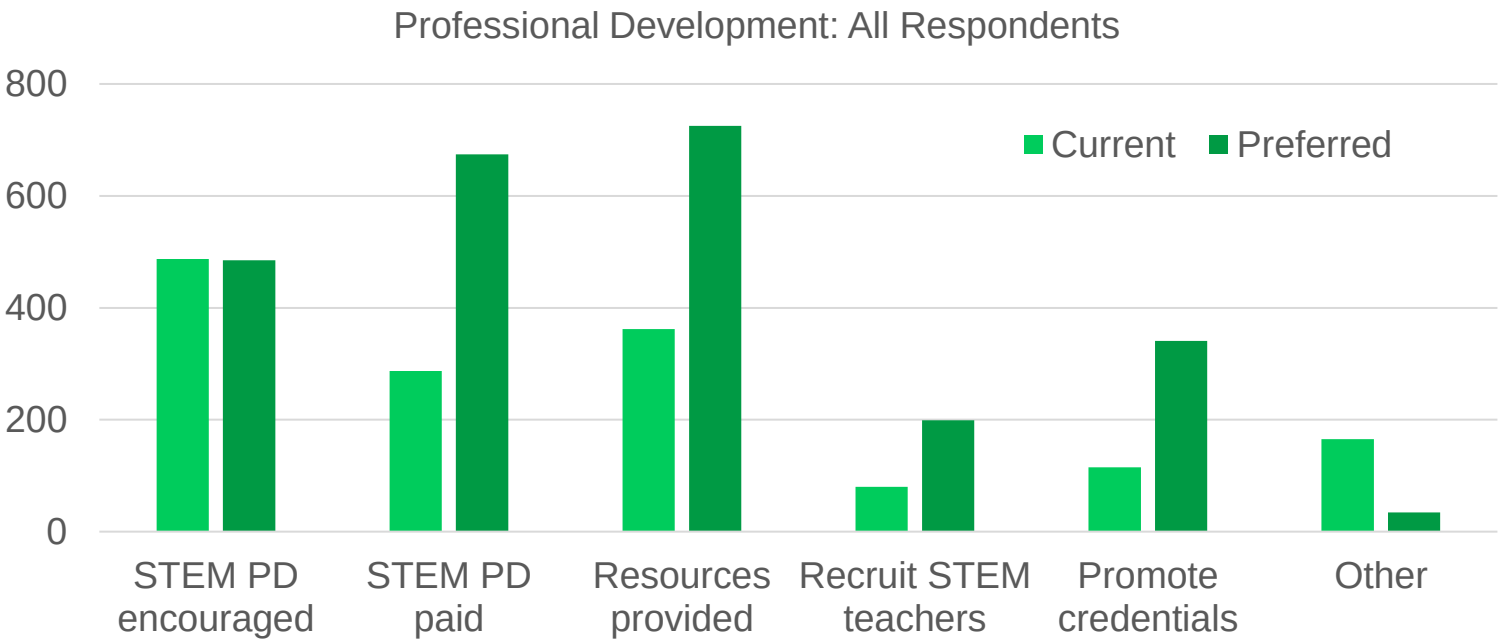


Professional Development Summary:

The current PD strategies that were most commonly identified were: (1) encouraging teachers to attend PD, (2) school paying for and making available STEM resources and (3) sending teachers to PD at school/district expense.

The same strategies were identified as being preferred for development, but with differing priorities: (1) school paying for and making available STEM resources, (2) sending teachers to PD at school/district expense, and (3) encouraging teachers to attend PD. Importantly, two of those strategies—sending teachers to PD at school/district expense and schools paying for and making available STEM resources—involved moving the cost of preparing to teach STEM subjects from teachers, instead assigning that responsibility to schools or districts. This suggests that cost may be a barrier to teachers addressing STEM topics in their classroom, which is deserving of additional study in the future.

Interestingly, there were several strategies that *fewer* administrators identified as preferred for development than the number that identified them as currently happening (encouraging teachers to attend PD, paying for and making accessible resources). Similarly, fewer secondary teachers of other subjects identified encouraging teachers to attend STEM PD as something they would like to see developed than identified it as already happening.

It is unclear why fewer administrators or teachers of other subjects would want to see these strategies developed than identified them as currently happening. One possibility for administrators is that they already believe themselves to be doing as much as they can to encourage PD attendance or to provide STEM resources for teachers. Teachers of other subjects may not want to be encouraged to attend STEM PD, especially given that they may already attend PD in their own primary subjects.

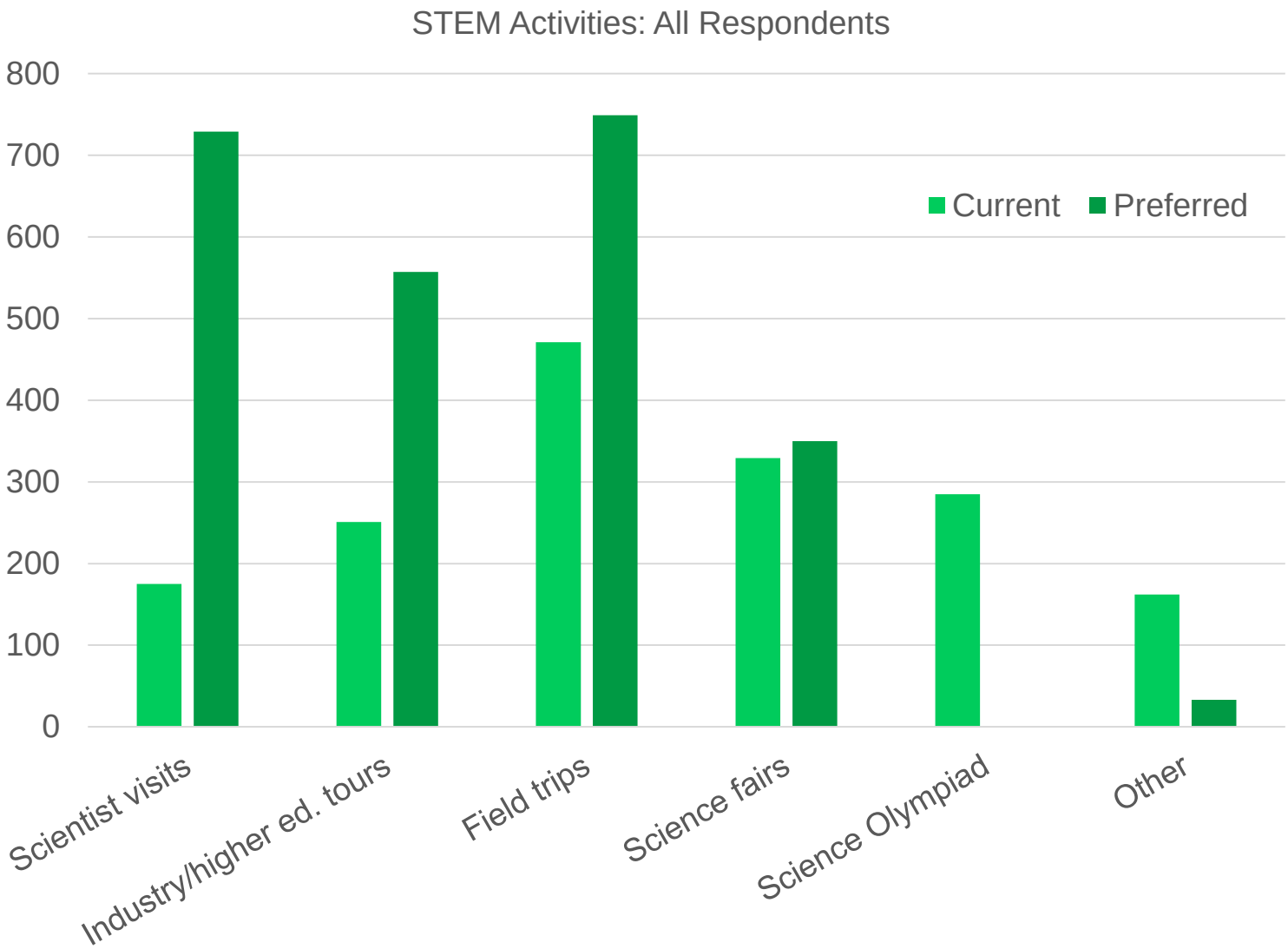
STEM Activities

Question 1: Current Activities

What science/STEM activities is your school currently involved in? (If you are a district-level administrator, please answer for your district).

Question 2: Preferred Activities

What science/STEM activities would you like to see developed or enhanced within your school/district? (Select up to 3 responses)



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Question 1: Current STEM Activities

	Admin.	Elem.	STEM	Other Subj.	Total	
Visits from scientists	11	52	44	68	175	
Tours of industry or higher ed.	23	39	63	126	251	
Curriculum-related field trips	27	240	68	136	471	**1**
Science fairs	25	120	61	123	329	**2**
Science Olympiad	17	48	88	132	285	**3**
Other	15	77	31	39	162	

Other responses, Current STEM Activities

Respondents identified a variety of other activities that their schools/districts are currently engaged in, including:

- STEAM/interdisciplinary activities (e.g., “STEAM days/competition,” “Incorporating Robotics into the art room,” “Battle of the Books”)
- Extracurricular organizations (e.g., “FFA,” “after school STEAM,” “Lego club”)
- Named programs (e.g. Smart Lab, FIRST Robotics, Gateway to Science, Future City)

Several participants noted structural/contextual barriers to implementing STEM activities:

- “Science fairs are often not implemented due to lack of paras”
- “it is really difficult to do these but I push for this. Our district makes this challenging.”
- “None currently offered due to funding.”

Many participants used the “other” space to indicate that they do not know of any STEM activities in their schools, responding with answers like “Nothing,” “none,” and “None of the above—but I would love any of these options in our school setting!”

Some participants, however, were optimistic about future possibilities, like the participant who wrote “We just received a STEM grant for next year!”

Question 2: Preferred STEM Activities

	Admin.	Elem.	STEM	Other Subj.	Total	
Visits from scientists	40	322	158	209	729	**2**
Tours of industry or higher ed.	32	207	142	176	557	**3**
Curriculum-related field trips	32	320	162	235	749	**1**
Science fairs	14	197	38	101	350	
Science Olympiad	0	0	0	0	0	
Other	2	14	4	13	33	

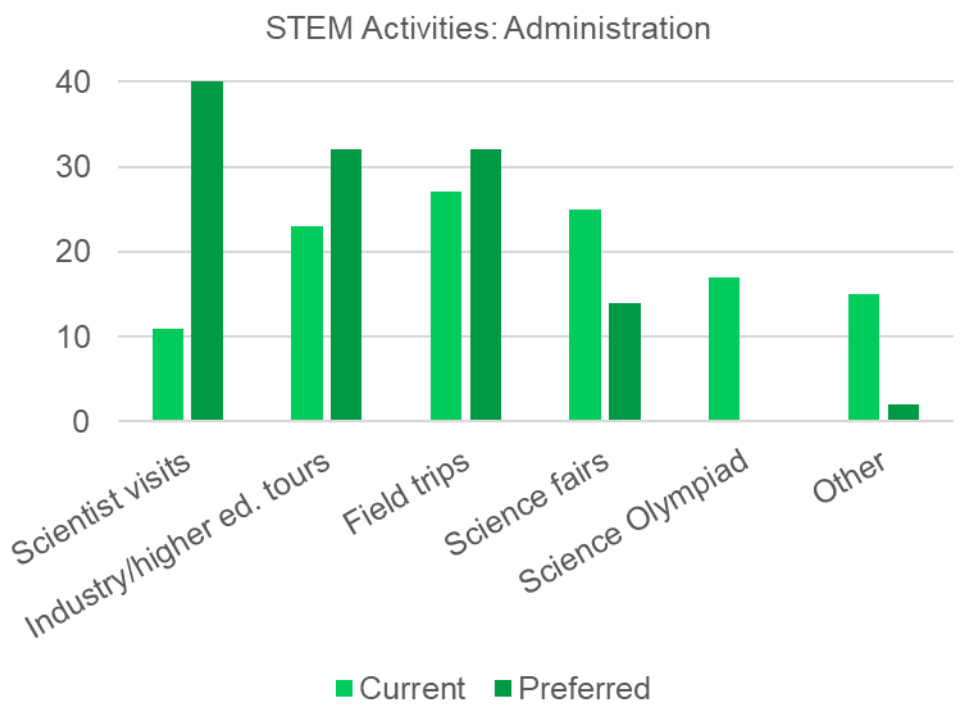
Other responses, Preferred STEM Activities

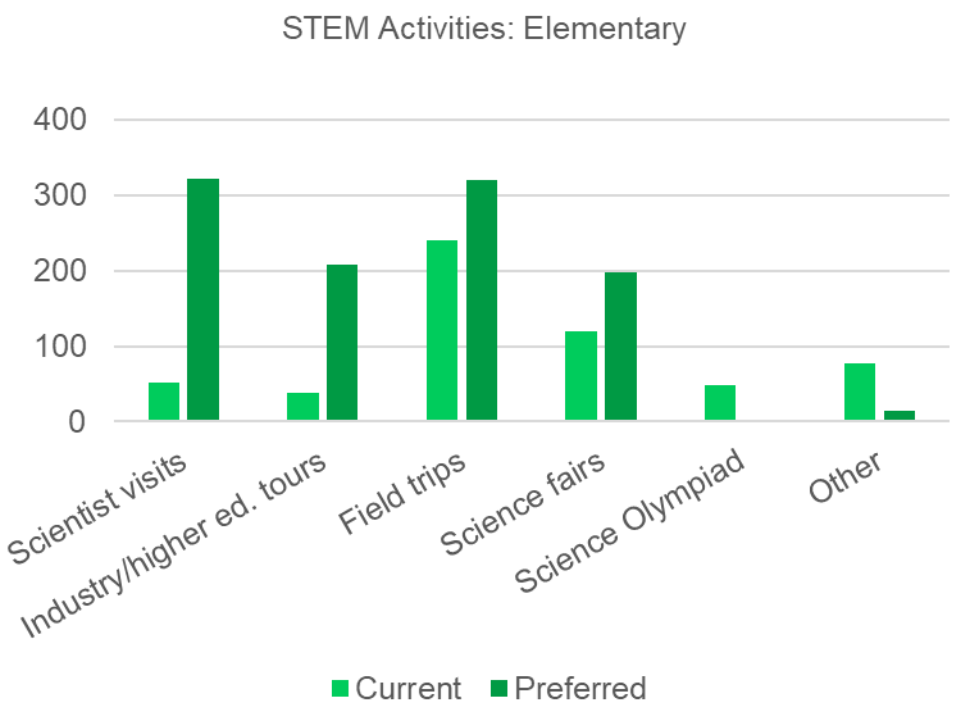
Fewer participants chose “other” for the question about what activities they would like to see developed. Of the answers that were provided, several indicated that they would like to see greater support for STEM through either resources or involvement, for example:

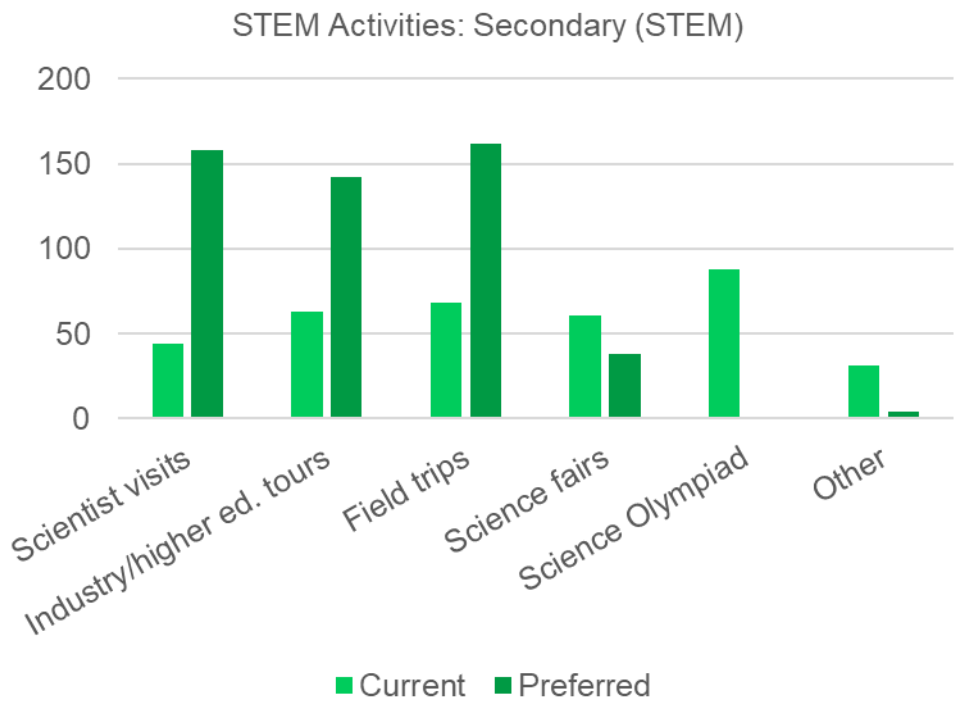
- “An investment in good curriculum, and matching lab supplies, so each new teacher isn’t rebuilding from scratch without assistance.”
- “Supplies to implement STEAM”
- “Parent involvement”
- “Resources for activities”

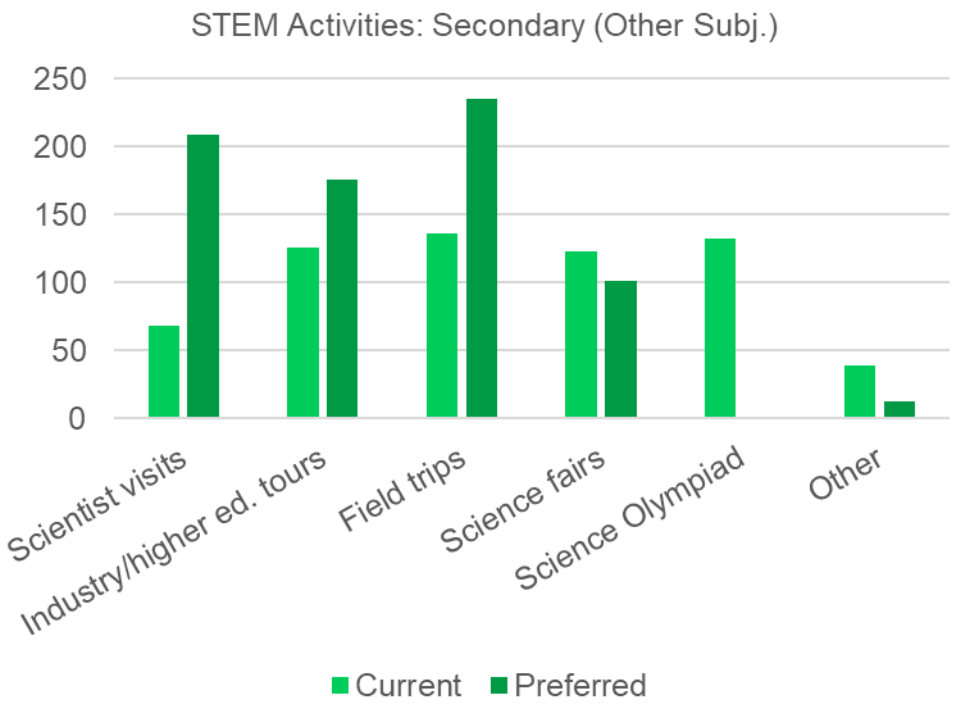
A significant category of responses included the desire to see more hands-on or interactive activities/approaches developed, as with these:

- “Tech club, robotics club”
- “Portable STEM activities”
- “Problem based learning”
- “Drone technology, sensors and pilot programs, etc.”









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STEM Activities Summary

The most common activities that respondents identified as currently happening in their schools or districts were (1) Curriculum-based field trips to museums, zoos, or natural spaces, (2) Science fairs, and (3) Science Olympiad.

The three most common activities that respondents said they would **prefer** to see developed in their schools or districts were (1) Curriculum-based field trips to museums, zoos, or natural spaces, (2) Visits from scientists in industry or higher education, and (3) Tours of industry or higher education.

About the same number of people described wanting to see science fairs developed (350) as said science fairs were already happening at their schools or districts (329). In contrast, although 285 people identified the Science Olympiad as happening at their school or district, making it the third most common activity, no respondents identified it as an activity they want to see developed.

There are several possible explanations for this. One is that respondents whose schools or districts do not currently participate in Science Olympiad may not be familiar with it; it's also possible that they are familiar with it but don't see it as particularly valuable for their students.

Another answer, which seems more likely based on the existing evidence, can be identified by looking at the activities that participants did identify as wanting to see developed. The three most commonly identified activities—field trips, visits from scientists, and tours of STEM facilities—all involve students coming into direct contact with STEM practitioners or facilities, and are all activities that would likely happen during school hours and be available to all students.

In contrast, Science Olympiad is an activity that a subset of particularly interested students participate in outside of school hours which is less connected to "real-world" contexts. It seems likely, then, based on these answers, that participants particularly value activities that bring all of their students into contact with "real" STEM, and activities like Science Olympiad aren't closely enough aligned with those values.

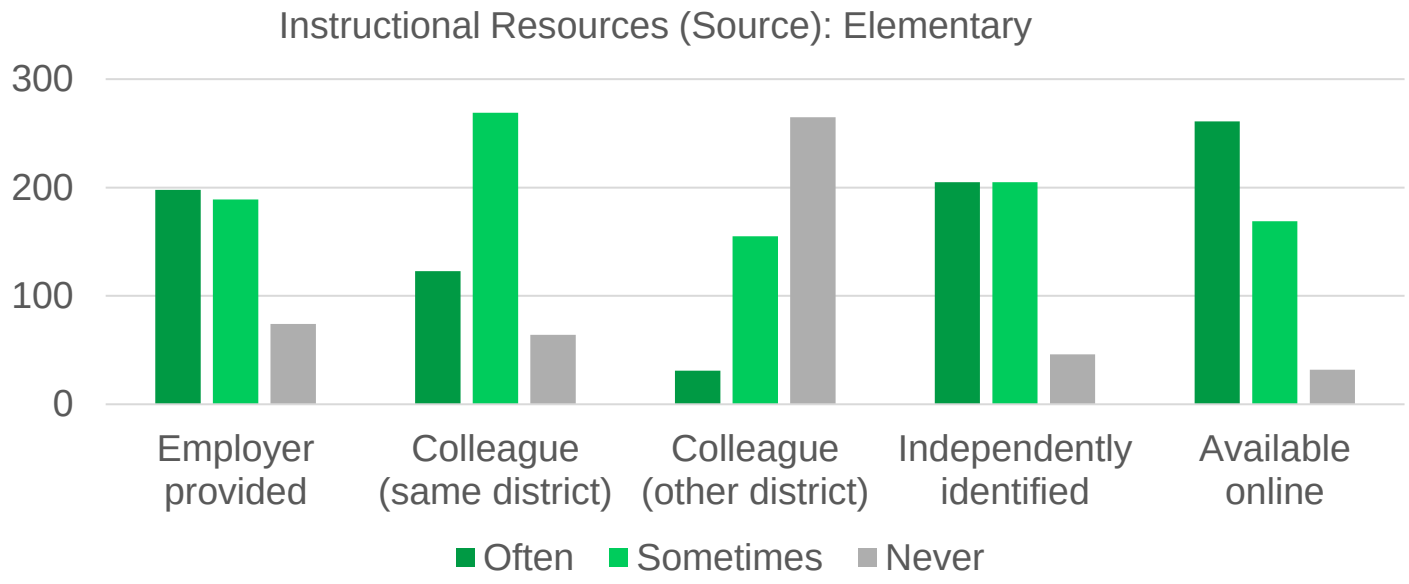
Instructional Resources (Source)

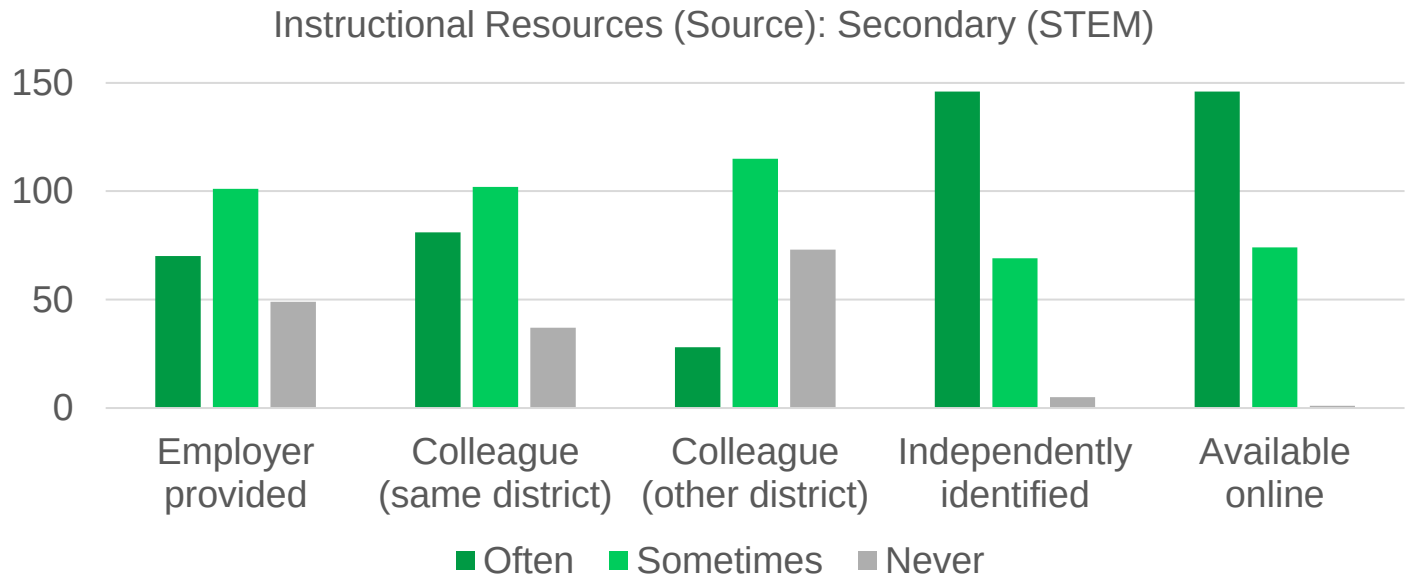
Question: When preparing to teach STEM topics, how often do you use instructional materials obtained in the following ways?

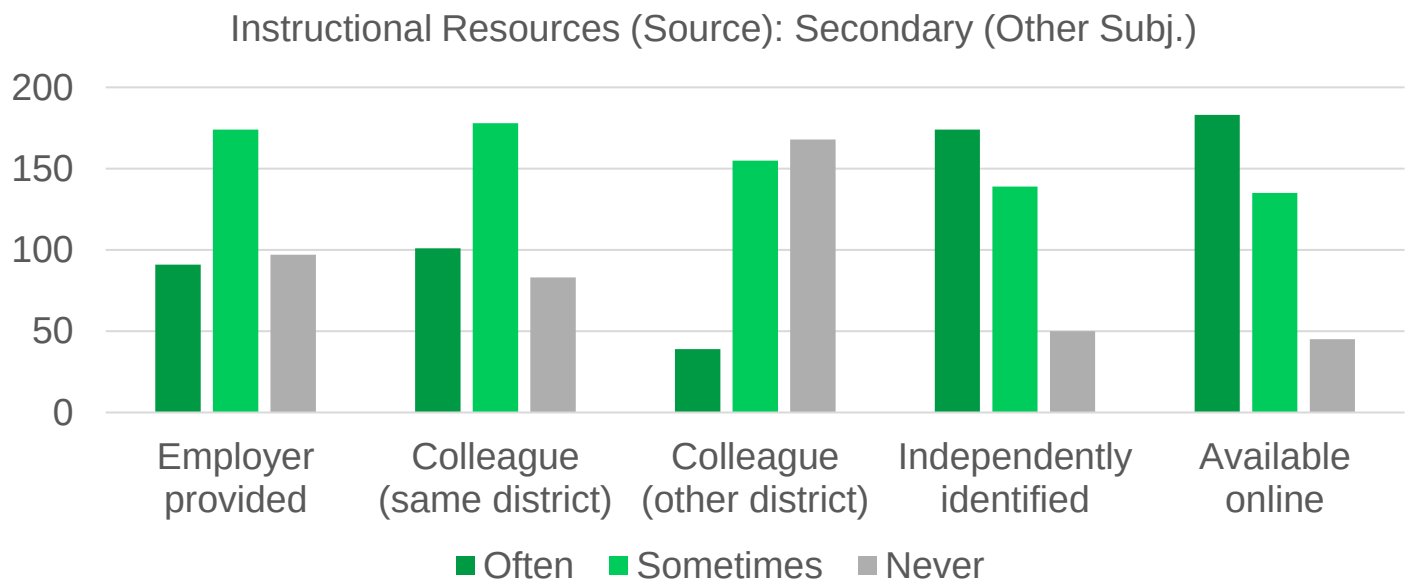
(This question was only asked of respondents who identified as a teacher.)

Instructional Resources (Source)

	Elementary			Secondary (STEM)			Secondary (Other)		
	Often	Sometimes	Never	Often	Sometimes	Never	Often	Sometimes	Never
District- or school-provided resources	198	189	74	70	101	49	91	174	97
Materials shared by a colleague in the same district	123	269	64	81	102	37	101	178	83
Materials shared by a colleague in a different school or district	31	155	265	28	115	73	39	155	168
Materials I independently identify	205	205	46	146	69	5	174	139	50
Materials or resources available online	261	169	32	146	74	1	183	135	45







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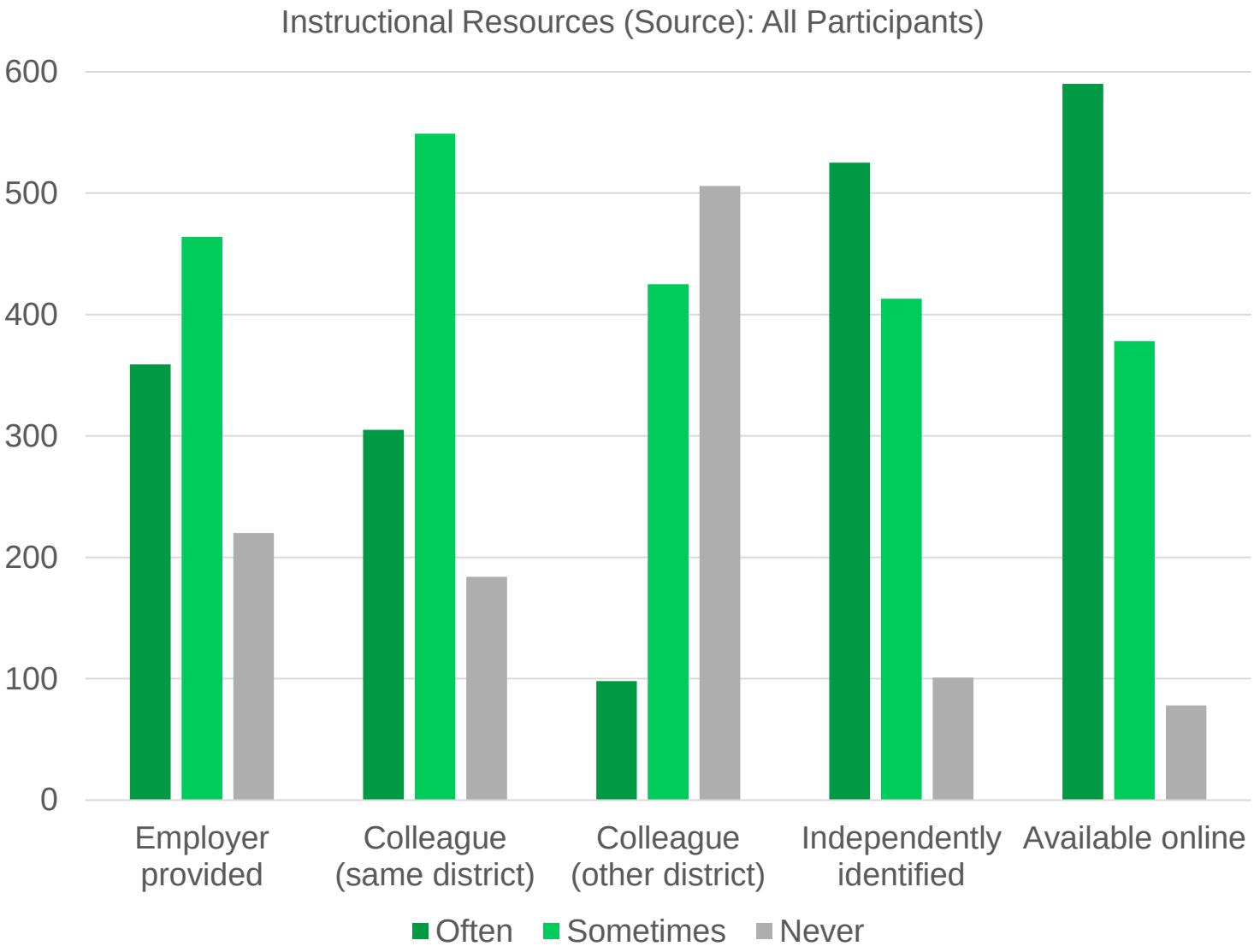


Instructional Resources (Source): All Participants

	Often	Sometimes	Never
District- or school-provided resources	359	464	220
Materials shared by a colleague in the same district	305	549	184
Materials shared by a colleague in a different school or district	98	425	506
Materials I independently identify	525	413	101
Materials or resources available online	590	378	78

Instructional Materials (Source) Summary

There were similarities across elementary and secondary (STEM and other subjects) teachers in the ways they reported finding STEM teaching resources. For example, the source that the largest proportion of each group said they use “often” was “materials I independently identify.”

The source that the largest proportion of each group said they “never” use was “Materials shared by a colleague in a different school or district.” This was particularly true for elementary school teachers, of whom 59% said that they never use materials acquired from external colleagues to teach STEM subjects.

This suggests that there may not be robust networks available to teachers to reach out to colleagues in other schools or districts for STEM materials, especially if STEM is not their primary area of expertise. The fact that only about a third of secondary STEM teachers say they never use materials acquired this way—fewer than elementary or other secondary respondents—supports this implication, as secondary STEM teachers likely have more opportunities and motivation to build professional networks related to STEM subjects.

Across all categories, the overwhelming majority of respondents said that they use materials acquired online to teach STEM topics. Only 7% of respondents said they “never” use “materials or resources available online.”

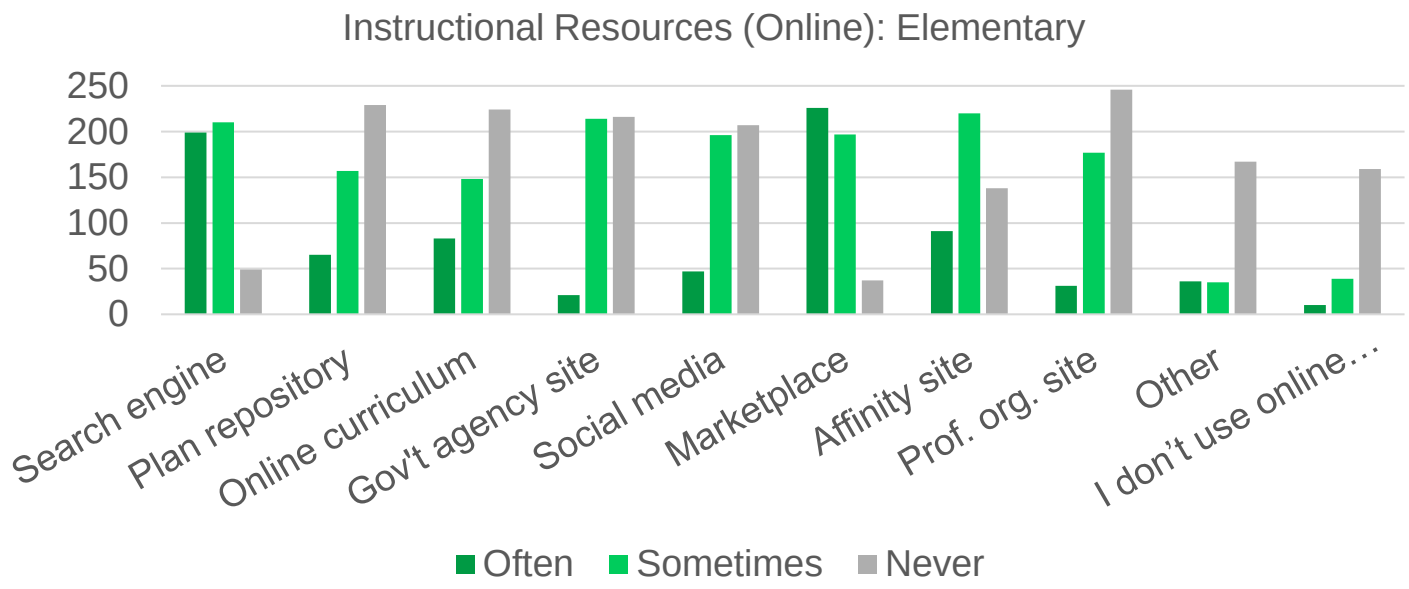
However, that 7% was not evenly distributed across the categories of teachers. Only one (approximately 0%) secondary STEM teacher said that they never use online resources, whereas 7% of elementary teachers and12% of secondary teachers of other subjects said they never use online materials to prepare to teach STEM topics.

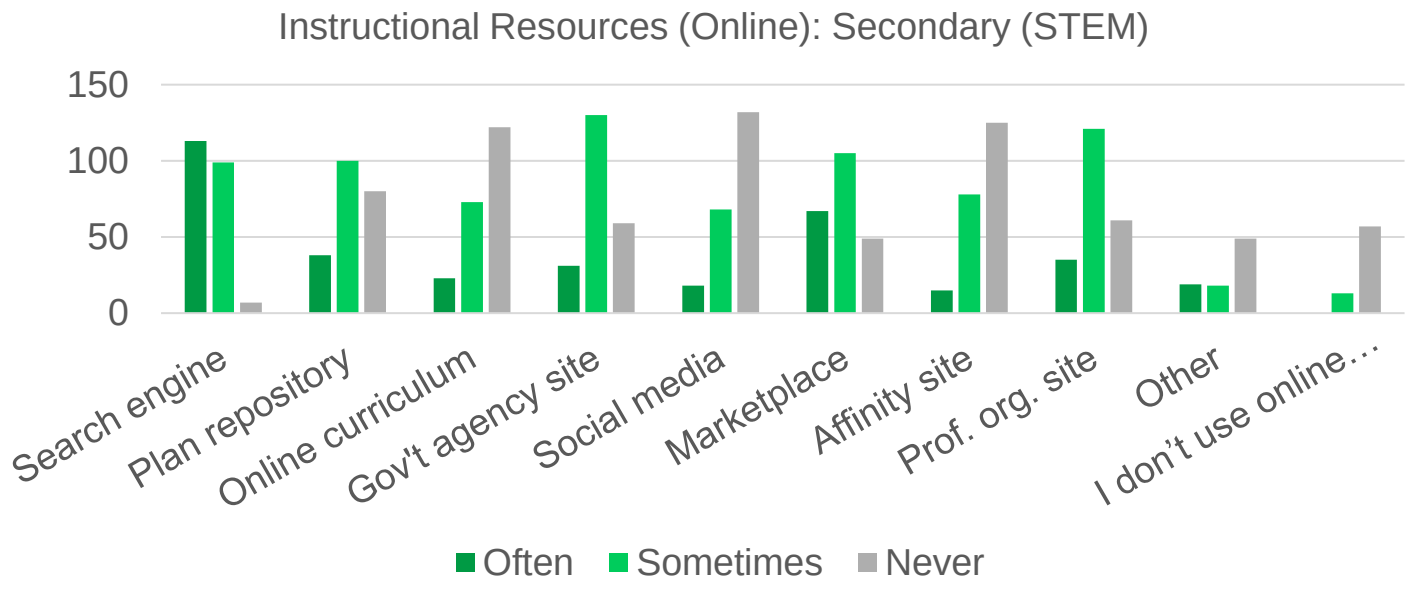
There are several possible explanations for this. At least some of those respondents who say they never use online resources may never, or very rarely, teach STEM subjects, in which case they would never use any resources to prepare, online or not. When those teachers who only occasionally teach STEM subjects do need materials to prepare, they may prefer to reach for the most accessible and/or familiar resources they have. Many of those familiar resources may already be located in their classroom or school, eliminating the need to search for online sources.

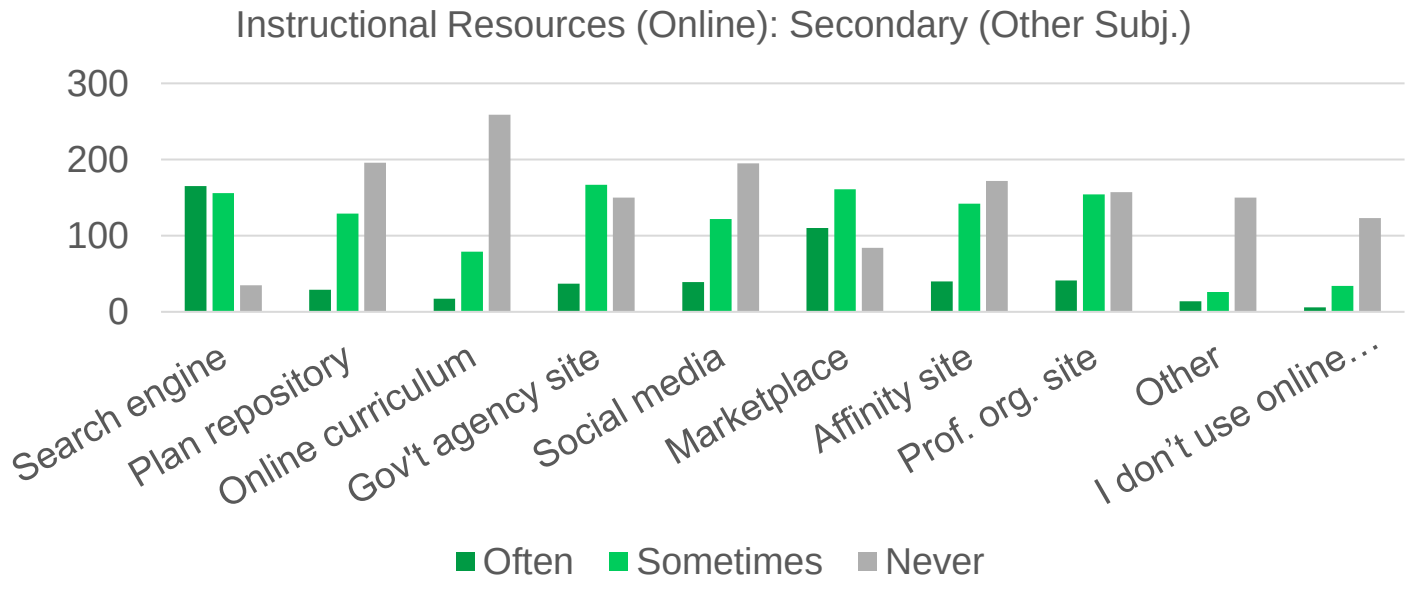
Instructional Resources (Online)

Question: If you use instructional materials or resources available online, how often do you use materials and resources you find in the following places to prepare to teach STEM topics?

	Elementary			Secondary (STEM)			Secondary (Other)		
	Often	Sometimes	Never	Often	Sometimes	Never	Often	Sometimes	Never
Results of a search engine (e.g. Google)	199	210	49	113	99	7	165	156	35
Online lesson plan repository (e.g., NGSS Life Science)	65	157	229	38	100	80	29	129	196
Online science curriculum (e.g. Amplify Science, Open Sci Ed.)	83	148	224	23	73	122	17	79	259
Government agency website (e.g., NASA or NOAA)	21	214	216	31	130	59	37	167	150
Social media platforms (e.g., Facebook, Instagram, TikTok)	47	196	207	18	68	132	39	122	195
Online educational marketplaces (e.g., Teachers Pay Teachers)	226	197	37	67	105	49	110	161	84
Affinity sites (e.g., Pinterest)	91	220	138	15	78	125	40	142	172
Professional organization websites (e.g., National Sci. Teaching Assn.)	31	177	246	35	121	61	41	154	157
Other	36	35	167	19	18	49	14	26	150
I don't use online resources	10	39	159	0	13	57	6	34	123







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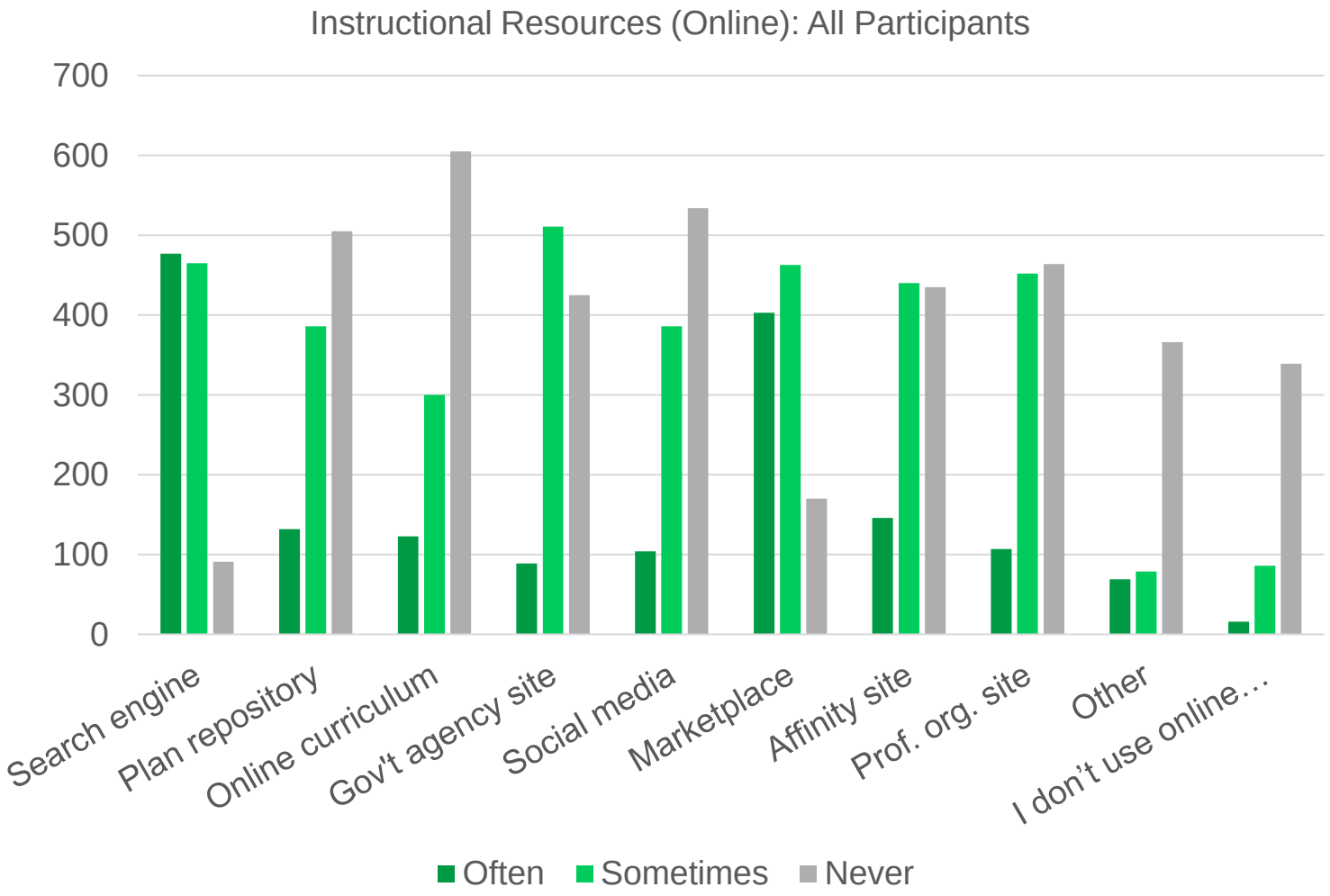


Instructional Resources (Online): All Participants

	Often	Sometimes	Never
Results of a search engine (e.g. Google)	477	465	91
Online lesson plan repository (e.g., NGSS Life Science)	132	386	505
Online science curriculum (e.g. Amplify Science, Open Sci Ed.)	123	300	605
Government agency website (e.g., NASA or NOAA)	89	511	425
Social media platforms (e.g., Facebook, Instagram, TikTok)	104	386	534
Online educational marketplaces (e.g., Teachers Pay Teachers)	403	463	170
Affinity sites (e.g., Pinterest)	146	440	435
Professional organization websites (e.g., National Sci. Teaching Assn.)	107	452	464
Other	69	79	366
I don't use online resources	16	86	339

Other responses, online instructional resources

The following table contains sample responses, each of which was identified multiple times by respondents.

Elementary	Secondary (STEM)	Secondary (Other subjects)
• Mystery Science • Mystery Doug • BrainPop • Scholastic (e.g., Scholastic News) • Generation Genius	• PhET • Coding sites (e.g., code.org, bluej.org) • IXL • College Board • Online tools (OpenAI, calculators) • Math resources (e.g. Math Medic, Delta Math)	• Media (reading, podcasts, YouTube) • Math resources (MathRecovery.org, Common Core math resources) • Agriculture resources (Ag Ed Discussion Lab, National Ag in the Classroom)

Instructional Resources (Online) Summary

Overall, the resource that the most teachers indicated using often was results of a search engine. The resource that the most teachers indicated using sometimes was government agency websites, and the most teachers indicated never using online curricula.

However, within these overall numbers there were notable differences between elementary and secondary teachers of both STEM and other subjects. The largest numbers of both STEM and other secondary teachers indicated often using results of a search engine and sometimes using government agency websites. In contrast, the largest number of elementary teachers reported often using online marketplaces like Teachers Pay Teachers and sometimes using affinity sites such as Pinterest.

This suggests that there may be significant differences between the ways that secondary school teachers and elementary school teachers prepare and teach STEM subjects. This finding in itself is not unsurprising, but the nature of the resources most commonly used points to some of the ways in which teachers' approaches may differ.

For example, Pinterest is a visually-driven site that is often used to find and share "hands-on" activities and art projects, while Teachers Pay Teachers makes it easy to find resources like printables. These are kinds of activities that we might expect elementary teachers to use more often than secondary teachers. In contrast, while you can find suggestions for activities and pre-designed handouts via search engines or government websites, you can also find more in-depth explanations of STEM topics, data sets, and other resources that secondary teachers may be more likely to use. Thus, the different resources identified by teachers may be a result of differences in instruction between age levels.

Instructional Resources (Used)

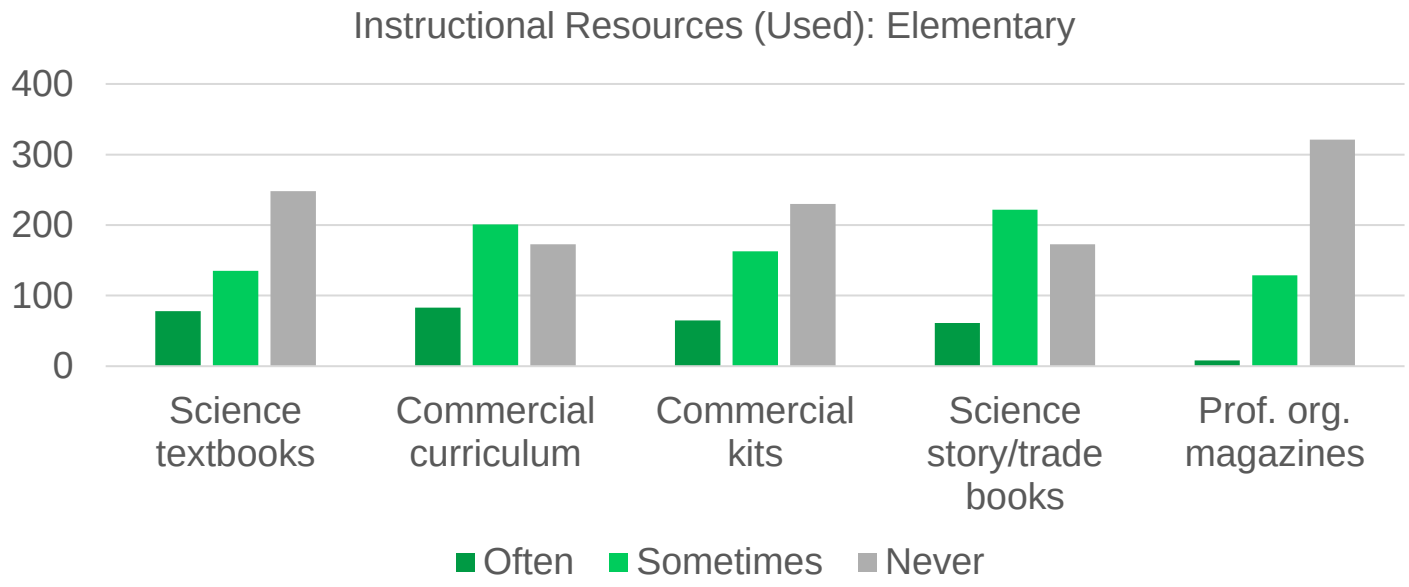
Question: How often do you use the following instructional resources to teach STEM topics?

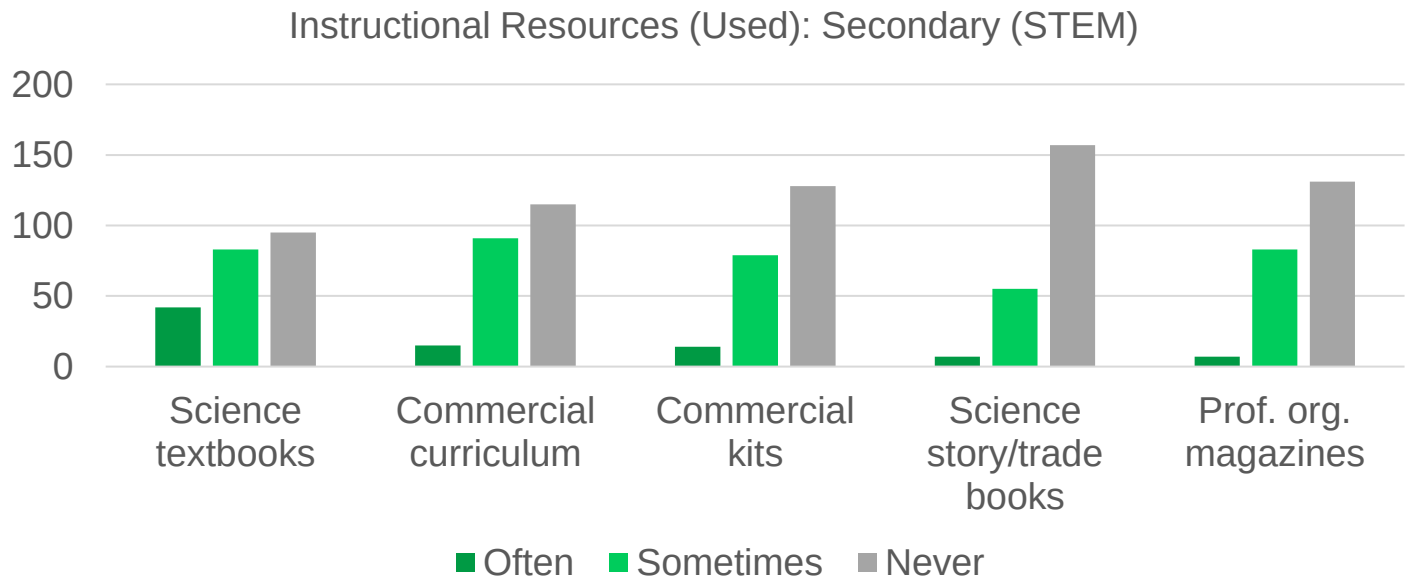
Instructional Resources (Used)

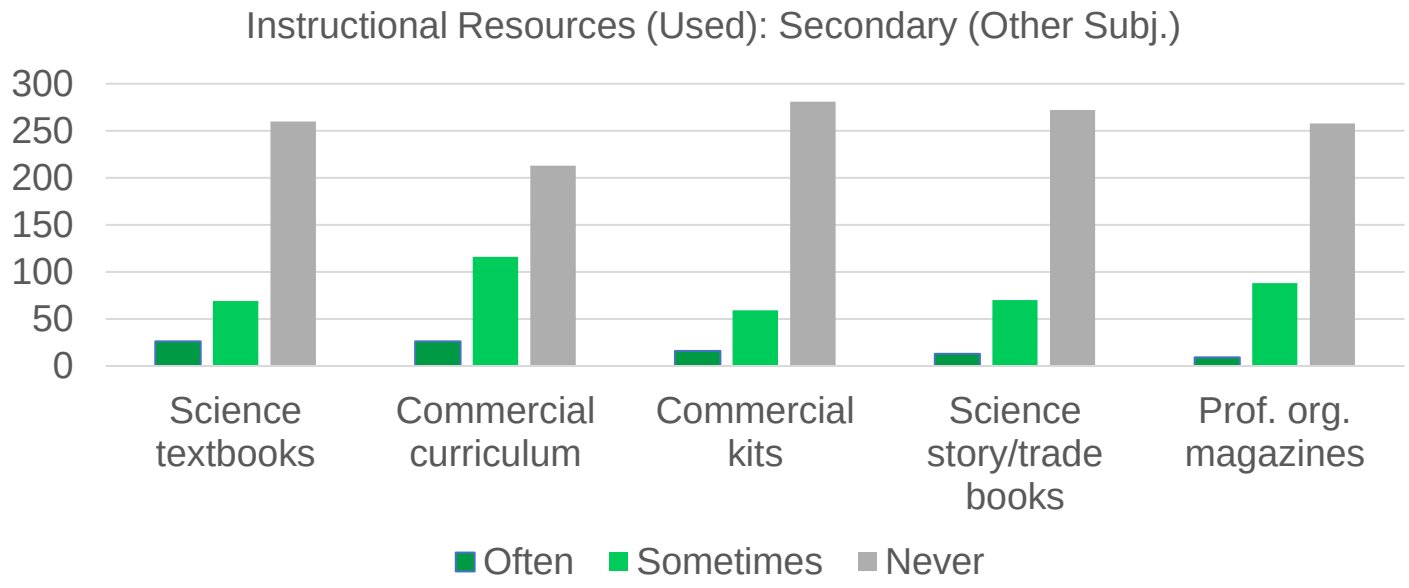
	Elementary			Secondary (STEM)			Secondary (Other)		
	Often	Sometimes	Never	Often	Sometimes	Never	Often	Sometimes	Never
Science textbooks	78	135	248	42	83	95	26	69	260
Commercial science curriculum (e.g., Discovery Education)	83	201	173	15	91	115	26	116	213
Commercial science kits (e.g., Foss, Delta)	65	163	230	14	79	128	16	59	281
Science story or trade books	61	222	173	7	55	157	13	70	272
Professional organization magazines (e.g. NSTA's Science and Children)	8	129	321	7	83	131	9	88	258

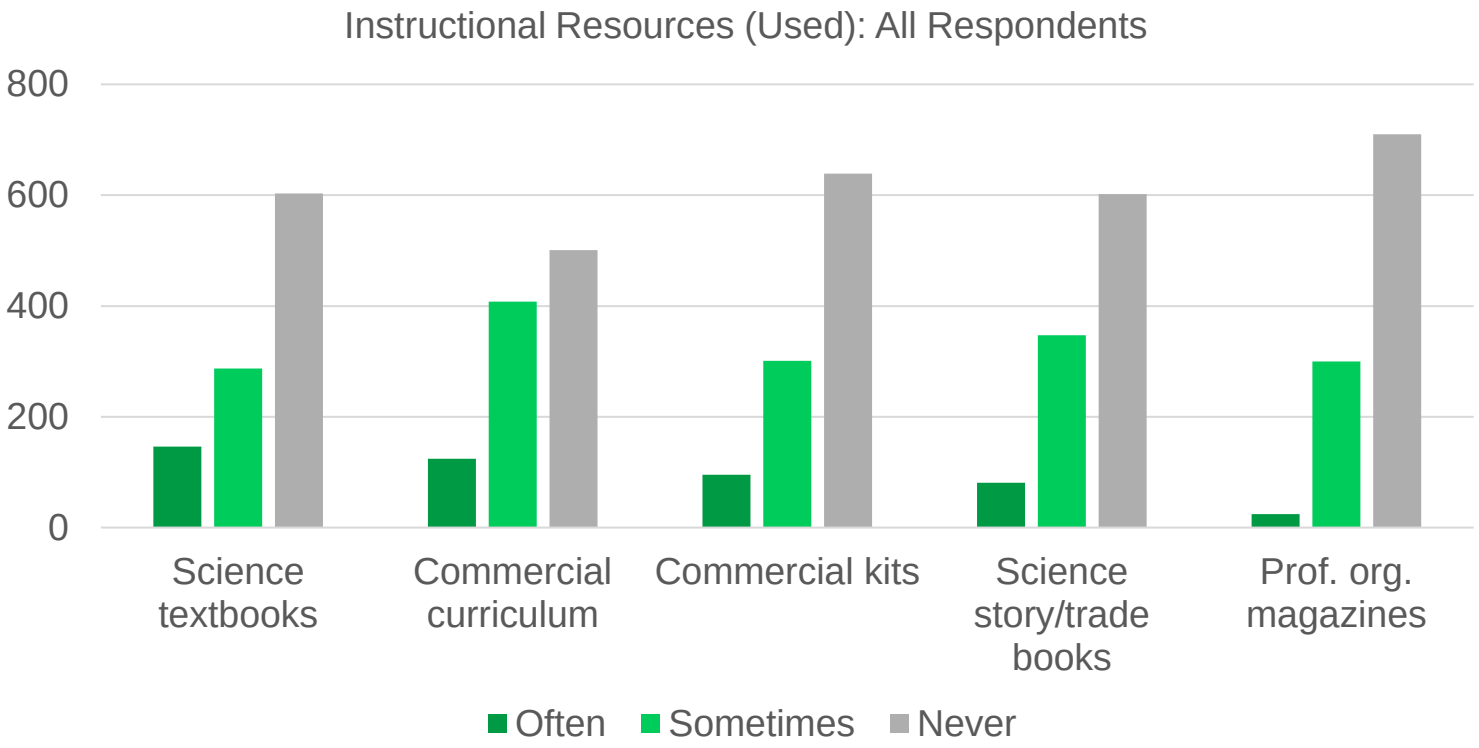
Instructional Resources (Used): All Participants

	Often	Sometimes	Never
Science textbooks	146	287	603
Commercial science curriculum (e.g., Discovery Education)	124	408	501
Commercial science kits (e.g., Foss, Delta)	95	301	639
Science story or trade books	81	347	602
Professional organization magazines (e.g. NSTA's Science and Children)	24	300	710


Instructional Resources (Used): Elementary
400
300
200
100
0
Science textbooks
Commercial curriculum
Commercial kits
Science story/trade books
Prof. org. magazines
Often
Sometimes
Never


Instructional Resources (Used): Secondary (STEM)
200
150
100
50
0
Science textbooks
Commercial curriculum
Commercial kits
Science story/trade books
Prof. org. magazines
Often
Sometimes
Never


Instructional Resources (Used): Secondary (Other Subj.)
300
250
200
150
100
50
0
Science textbooks
Commercial curriculum
Commercial kits
Science story/trade books
Prof. org. magazines
Often
Sometimes
Never



Instructional Resources (Used) Summary

The majority of teachers reported never using any of the resources listed in this question. The largest number of teachers reported often using science textbooks, sometimes using commercial curricula, and never using professional organization magazines.

It's notable that comparatively few teachers reported using these resources. There are several possible explanations for this. For example, these are resources that are usually used in hard-copy; given the popularity of online resources among teachers, they may be less likely to turn to physical books or resources. Additionally, all of these resources are ones that cost money to acquire. Remembering that the largest proportion of teachers identified "financial assistance for equipment and supplies" as a resource that would increase educator effectiveness, it is possible that teachers would like to be able to use these resources, but do not have the funding to do so.

As with the question about online resources, there were differences between the resources that elementary and secondary teachers reported using. The largest number of elementary teachers reported often using commercial science curricula, sometimes using science story or trade books, and never using professional organization magazines. For secondary teachers of both STEM and other subjects, the largest number of teachers reported often using science textbooks (tied with commercial curricula for teachers of other subjects) and sometimes using commercial science curricula. As with online resources, this is likely a result of differences in the way STEM subjects are taught across grade levels.

STEM Excitement

Question: How excited are you about developing/enhancing STEM activities in your school? (5 = very excited, 1 = not excited at all)

Average Excitement	
Administrators	4.0
Elementary	3.9
Secondary (STEM)	4.0
Secondary (Other subjects)	3.3
All Participants	3.7

Summary

Overall, respondents were excited to develop or enhance STEM activities in their schools. Administrators and secondary STEM teachers were the most excited, and secondary teachers of other subjects were the least excited.

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Summary

This study surveyed 1,078 North Dakota administrators and teachers to learn more about STEM education needs in the state. As demonstrated in this report, analysis of survey results revealed the following:

- Educators believe that online curriculum and lesson plan resources, as well as financial assistance for equipment and supplies, would increase educator effectiveness.

- In terms of professional development, educators would like to see the following practices developed further in their schools or districts:
    1. School/district pays for STEM resources and makes them available.
    2. Interested teachers/staff are sent to STEM PD at school/district expense.
    3. Teachers/staff are encouraged to attend STEM PD.

- Educators would like to see activities developed in their schools or districts that allow all students to engage with “real” STEM, including field trips, visits from scientists, and tours of industry or higher education.

- When preparing to teach STEM topics, the largest number of teachers often used materials they independently identified, sometimes used materials shared by a colleague in the same school or district, and never used resources shared by a colleague in a different school or district. This suggests that teacher networks in relation to STEM are fairly weak between districts, especially for elementary teachers and secondary teachers of other subjects.

- Considering online resources, the largest number of teachers reported often using results of a search engine, sometimes using government agency websites, and never using online science curricula. However, there were differences between elementary and secondary teachers.

- Few teachers reported using the materials specifically asked about in “Instructional Resources (Used).” Of those that did use those resources, the largest number often used science textbooks and sometimes used commercial curricula.

- Overall, ND educators are excited about developing STEM in their schools!

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Research for this report was conducted by Caitlin Brecklin, PhD, under the supervision of Robert Stupnisky, PhD, with advice from Diana D'Amico Pawlewicz, PhD and Ryan Summers, PhD. Research was conducted at the University of North Dakota.

Research was conducted on behalf of the North Dakota Established Program to Stimulate Competitive Research (NDEPSCoR).

How to cite:

Bureau of Evaluation and Research Services, & Initiative for Rural Education, Equity, and Economic Development (I-REEED). (2023, July), *North Dakota 2023 P-12 STEM Needs Assessment*.

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