| Variable | Definition of Variable | Items for JRST paper | Possible items for LTA paper (Grade 7) |
| --- | --- | --- | --- |
| Family Support | Perceived support for science from family | Family thinks it is important for me to learn science, Family thinks science is interesting, Family would be happy if I decided to pursue a career in science, (Step)mother has science-related job, Other family member with science-related job | Encourage hard work-math (AB19E)  Encourage hard work-science (AB19F)  Think math important (AB19Q)  Think science important (AB19R)  Encourage science career (AB19T)  Parent academic push (PACPH7)  Parent college push (PCOPH7)  Parent math push (PMHPH7)  Parent science push (PSCPH7)  Home science resources (HSCRE7) |
| Extracurricular Activities | Participated in extracurricular science-related activities | Attended a science camp or special science program, Took an extra science class in the summer (not make-up), Participated in a science fair, Participated in a science club or team | Math club (BB10L)  Computer club (BB10M)  Science club (BB10K)  Visited science museum (BB11J, this school year)  visited zoo (BB11L, this school year)  Visited science museum (AB15J, last summer)  Visited zoo (AB15L, last summer)  Entered a science fair (BB11E) |
| Academic Self-Concept | Perceived confidence in academics | I can learn new ideas quickly in school, School is easy for me, I can understand difficult ideas in school, I am capable of getting straight A's, I am good at learning new things in school | I work until correct (AB37M)  Struggle vs give up (AB39O)  I give up soon (AB39B)  Bad grades🡪try harder (AB39H)  Try hard to do best (AB38F)  Generally I am a good student (CB24F)  Able to do things (AB37D)  Good grades 🡪pride (BB17B)  Learning important to me (BB17G) |
| Science Self-Concept | Perceived confidence in learning science | I think I could be a good scientist one day, I can learn new ideas quickly in science, I can understand difficult ideas in science, I am capable of getting straight A's in science, I am good at learning new things in science | I like science (AB39M)  I am good at science (AB39N)  I understand science (AB39O)  Science makes me nervous/upset (AB39U, reverse)  It scares me when I open a science book (AB39S, reverse)  I worry about science tests (AB39R, reverse?) |
| School science experiences | Extent to which science classes offered opportunities to do things that make science learning relevant and interesting | Feel bored in science class (reverse coded), Enjoy learning in science class this year, We learn what real scientists do, Doing well in science class is important to me, Teacher thinks I could be a scientist one day, Teacher has high expectations for me | Current science teacher:  Enjoys teaching science (BB12A)  Expects best from me (BB12B)  Encourages extra work (BB12C)  Expects me to work hard (BB12D)  Expects completed homework (BB12E)  Is a very good teacher (BB12F) Talks to me about jobs (BB12G)  Expects me to go to college (BB12H)  Treats boys/girls differently (BB12I)  Makes me feel dumb (BB12J)  Gives extra help (BB12K)  Really seems to like me (BB12L)  Encourages me to take more science (BB12M)  Encourages math/science job (BB12N)  Pays attention to boys (BB12O)  Thinks it is important I do well (BB12P)  First science class  Like subject (ABSCIC)  Teacher clarity (ABSCID)  Class challenge (ABSCIE)  Career utility (ABSCIF)  Text clarity (ABSCIG)  Class difficulty (ABSCIH)  Computer use (ABSCII)  House homework (ABSCIJ) |
| Peer Support | Influence of peers | N/A | Most of my friends  Like math (AB20A)  Like science (AB20B)  Do well in math (AB20C)  Do well in science (AB20D)  Hope to be scientists (AB20H)  Peer academic push (KACPH7)  Peer math push (KMHPH7)  Peer math science push (KMHSCPH7)  Peer science push (KSCPH7) |

Other Variables (possible covariates, proximal/distal outcomes)

Science needed for 1st job: none, I don’t need any for this job (BB25A), biology (BB25B), chemistry (BB25C), physics (BB26D), I am not sure (BB25E)

Job career preference: not require math ability (DB16E), with numbers/formulas (DB16G)

Interest in social issues: space exploration (AB34B), scientific discoveries (AB34D), energy policy issues (AB34J)

How well-informed about: space exploration (AB35B), scientific discoveries (AB35D), energy policy issues (AB35J)

Science opinions and knowledge: improves standard living (CB35A), solar energy promising (CB3C), unemployed could get jobs (CB35F), scientists work for good (CB35N)

Mother’s education (MOTHED)

Father’s education (FATHED)

Mother’s occupation (MOTHOCC)

Father’s occupation (FATHOCC)

Occupational choice (first choice-coded, AB22A)

STEM occupation (RSTEMMB)

STEMM major when received baccalaureate (RMAJLAST2)

Summary science achievement scores

Summary math achievement scores

Gender

Ethnicity