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**Title word cross-reference**

3 [CC18, DA20a, DA20b, NF20, SLW10]. n [BHWM20]. Q [Gao20].

-D [SLW10]. -Sorting [Gao20]. -th [BHWM20].

1 [SYOL07]. 11th [ES09, FT05]. 11th-graders [ES09]. 12
[LFM+19, MHIS09, OBH17, VHM22]. 15 [LGS18a, LGS18b]. 15-year-old
[MR14]. 15/16 [DAM19]. 15/16-Year-Old [DAM19]. 16-Year-Old
[DAM19]. 19 [DF22].

21st-Century [SD22]. 280 [VT07a].
PYR$^{+12}$, RCG$^{+11}$, SW14, Tan11, TC09, THV$^{+15}$, Approaches
[CP17, Chi09, DNWC18, EK09, KBH$^{+15}$, Ron18, Shi18, TDE18, EG$^{+09}$],
Appropriate [Gub16, SMB12], Appropriation [NK04, ODTS07],
Aptitude [CGTQ21], Arab [PZA16, SHM21], Arabia [Alg20, KA19],
ARCS [FT05], Area [Hua17, LL21b, SA16, Pap10], Arena [YAC10],
Argument [CWLH19, JYC21, Pet22, YY13, CKH15], argument-based [CKH15],
Argument-Driven [CWLH19, Pet22], Argumentation
[APCK12, AO16, CWLH19, CYT16, CGR17, CO22, DIBS22, DA20a, DA20b,
EkB19, HK21, HNMG16, JHWW16, KVBB22, LL05, TSP16, Yaml8, YY13,
Cro09, LM10, Lin14b, Lin16b, OBE12, Oh14], Argumentative
[Yaml8, AE16], Arguments [DB17, KAK22, AC15], arises [LY13],
Arithmetic [RXLC16, RVTV20, AM14a, Voy11], Arithmetical
[Gub16, Mas15], Arrhenius [ODTS07], Arrows [GY19], art [HEB11],
Articulating [Koh19], Artifacts [SP21b], Arts [SLK20], Asia [BSD13],
Asian [So16, WL21, ZL11, ZK20], asking [DMNH11], Aspects
[GAMDV22, JWR20, NHLS08], Aspiration [Ng20], Aspirations
[HGSL18, DAO$^{+11}$, MR14, SC11], assess [MSH10, OEMZ12], Assesses
[PCL18], Assessing [AO16, BSA$^{+14}$, BB17, BSD13, BG22, DHB19, ES16,
Ja20, JSP15, Lep12, SLC17, YL18, YWC$^{+18}$, AW12, GGSP10, WCT$^{+12}$],
Assessment [ALT$^{+07}$, AK20, AEP22, CY21, CGR17, DJB15, EA19, Foo22,
GPCB15, HMM22, KHNV20, KBK$^{+22}$, jK19, KK22b, LL06, MSGGZDF20,
MMA05, NOVR22, PP08, PB19, SV22, SAA18, SLZ20, TMS22, WC16,
ZVV18, CCN$^{+12}$, Chi12b, CMME15, CJOC11, GDSD10, KBY11, Lin06,
RB13, Sah10, WHA14], Assessments
[BRA$^{+20}$, CC05, Fos22, KBH$^{+15}$, OHMW21, VC17, NFK10], Associated
[LCA16, MDF08, Sai18, GCS10, WLSL14], Association [LM21],
Associations [ELRW20, LLN$^{+21}$], Associativity [AK17a], Astronomy
[Rol19], asymptote [Kid11], Asymptotes [KSC20], Asymptotic [KSC20],
Asynchronous [CH20], Atayal [CLY10, HL13], Atmosphere [LAN20],
attachment [Kuw13], Attainment [IAS17, Ing14, Wel15], attempt [AH11],
Attempts [Bla04, IK18], Attention [ANLL21, CGÖ22, Shi21, Wil20a],
Attitude [CO18, HHT21, HCH16, SWCH20, SK17, SWAES19, Rut11, Tig14],
Attitudes
[AAFF17, LJ16, LHC17, LLN$^{+21}$, MNBZH$^{+05}$, MDF08, MF05, SAA18, SF05,
Su08, TKDD19, BSLM16, BW10, CPMSW11, CBDV10, HK11, HY05,
KB16b, KB17, KSE16, LY10, LH16, PSC$^{+13}$, Uit14, WT15, Zei10],
Attributed [AAM20], Audir [Tsa06], Australia [MP10, VC17],
Australian [CMP19, EDS10, MKL$^{+15}$, Xu22, ZS11], Authentic
[CC05, Gil04, Koh19, Ron18], Authenticity [Lil07], authored [HBTP13],
Authoritative [BL21], Authors [Ano03b, Ano03c, Ano04a, Ano04b],
Autonomous [Gal22], autonomy [BK13a], Auxiliary [GAMDV22],
Availability [WM17], Avoiding [SBS$^{+07}$], Aware [CO22], Awareness
[EB20, Ron20, CBDV10, Web13],
Based

Balance

Barriers

Bases

Basic

Beliefs

Benefits

Bernstein

Better

Between

Biases

Binational

Biological

Biotechnology

Bivariate

Blackbody

Bloom

Boatbuilding

Bolivian

Boundaries

Bosnian
[Bar17, TSC17, Hob13], boundary-crossing [Hob13], Bourdieuan [Med10]. Box [LKC+15], Boy [SCB16], Boys [Sun16a], Brain [WLSL14, NDD14]. Breaking [LL20], Bridge [ELO08, WLSC09], Bridges [EK19], Bridging [CWHL19, FL11], Brunei [Dhi08], Budapest [And03], Buddhism [Leu05]. build [Che14], Building [Ceg21, LYP14, Sch15, WOB12], Buoyancy [HKSL22], burning [CLY10], Buttons [Sum16a].

C [MJMOR11], cadaver [MIJJ15], CAI [Ran06], Calculations [KL18b, LTM18, DGD+12], Calculus [CCT16, Dah17, WQNC17, MMR15, PK15, PSC+13], Call [Ano12c, Ano13, SL13, RR09, Tsa13], Camp [HMHG20, AMBLL16], camps [AMBLL16], Campus [PDUA21, WSW+08], Can [Hil18, Lin16a], Canada [DRT+12, LS14], Cancer [WLSL14, NDD14], Canadian [HY05], Candidate [KS21], Candidates [MWM05, Lee16a], Capabilities [SD16], Capacitation [DJZ21], Capacitors [DJZ21], capacity [AM14b], Capital [CS16, Ceg21], Capturing [SR21], Career [BB19, KB21, KBK15, LKL20, PH19, SEW18, Sas19, Sas21, Ing14, Lee16a], Careers [Bin20, HGSL18, MRJ+19, PD17, CPMSW11, DAO+11, KB16b, Utt14], Carry [LTT+19], Cartesian [GZ21], Case [AVM16, Alg20, AD16, BFH19, BAN21, BC05, CW06, CT17, CC05, CABRO6, Dog12, EHM19, ERC03, GRWHP19, HA07, KD09, KBK+22, LB08, LKL20, Mad22, MC03, El 21, NAČE22, Ng19, NF20, On21, PPB18, PL19b, PN04, PB09, QVST17, Ron20, Saf18, SC21, SAA18, SLZ+18, Sty08, TM17, TT22, TSP16, VWH+17, VC17, AB14, BSA+14, Bay13, CdHD16, Cha10, CL10, DW15, EDS10, ELY15, Emo09, HWFY14, IK14, KYA13a, KYJS12, KK16, LH14, Mor09a, Mor09b, MPB10, OS10, OO12, PZLR16, PV14, SY14, TO12, TBDBLY16, ZS11], Case-Based [KD09], Cases [PH19, Lin16b, MNE12], Caused [ZGZM17], Causes [PP15, LTT09], CCEM [PCL18], CD [LCC11b], CD-ROM [LCC11b], cell [Rt10], Center [ABH17], Centered [MH17, SJL20], central [DCFC16], centred [RCT+11], centres [MG15a], Century [SD22, Pap10], Certain [JLCh21], certification [BAV+11, OEMZ12], Chains [PSM+20], challenge [And14], Challenges [AO16, BAN21, HKS18, KBK+22, PA22, SVME15, WIl21, WHC17, ACY10, SB09, ZKS+05], Challenging [RH19, THV+15], Change [BC06, BHD+15, ÇAC07, CB16, EG17, HA07, HFHV17, LR20, MC04, MQ07, SF22, YY13, BPG11, BEF15, BMN16, ÇAC09, OS10, OdC15, PYR+12, RVG15], Changed [FI19, KHL12], Changes [KR18a, SYO15, SYO17, WL08, Xu22, KIR12, ME13, RK10, TCC+10], changing [KB17, LG13, SP15], Character [KKL20], Characterise [Yeol17a, Yeol17b], Characterising [AFG21], Characteristics [PS017, Sas12, SP21a, TKDD19, SY19, Bag11, GCS10, Las13, PPS12, SP15], characterizes [Ped15], Characterizing [GLSM11], characters [Che11], Charting [Lee18], CHAT [SB21], Chemical [Bil06, EG17, FMOMG16, HP21, SB17, TBP17, OdC15], Chemistry
chemistry-learning [BSA+14].

Childhood [TM17, Ulm12, Lee16a, TOV12]. Children [AVT16, CPTM12, CWLH19, EA19, Giv09, Hua17, KRT11, LLN+21, MB21, MF05, RVT12, RMR22, SBN16, So03, Sk17, VWH+17, WwLD+15, Bra12, BVDV13, Can14, Che11, Chi12b, Fer14, HPP09, HY05, LCC11b, SBN14, PPB18].

Chile [THV+15, TLHV16a, TLHV16b]. Chilean [GS16, SCG+19]. China [HDvJ21, JHWW16, LKL20, WB20, WO19, WHC17, YKKB19, ZSW+21, ZKS+05, ZC15, ZF06]. Chinese [BVDV13, CW06, CJ17, CL10, CVCC11, Che11, Din18, Gao20, GHL22, HZL22, HFWY14, JC10, JML21, JW15, KL18a, Len06, LZO+18, LP11, LH16, MLK+15, NHLS08, Ng10, RXLC16, X21, YKB21, ZBL+16, ZYJ22, ZS11, ZVV18].


Class [CH20, EP21, MSdSGG17, El 21, OE19, vKF22, CMME15, KYJS12, LLL15, MMZ09, SVME15, WT15]. Classes [BCC06, SCB16, SJL20, AE15, EE11, ETG16, EK09, GGSP10, MOdBB12, SOTF13]. Classification [FMOM16, YYC04].

Classroom [And03, ANLL21, BE16, Bla04, CK22, CBR21, CO22, DS18, DA20a, DA20b, DKL16, EHM19, EH18, Fre21, GHS+18, HK21, IK18, JLL20, KHVN20, LTT+19, Leu05, Leu19, MHS09, MSAGHMNG19, MBMR08, MF05, El 22, NHLS08, OS10, PP15, PDUA21, PCL18, RTM+20, SLV22, Sch14, Shi18, SO05, SGHM15, SGHM16, TM17, TA15, VJ06, WQNC17, Xu22, YS19b, Av06, Ale14, CK14, CL10, CYK+16, Fos15, GLY09, HL13, KTBG15, Lee11, Oh11, PDG15, Pap10, Pet13, QM14, RB13, SIS+11].

Classrooms [Fan21, FHMa18, Fun21, HNMG16, HNAA16, HK15, KBK+22, KFM+17, LFF03, MDT13, NuKr+18, NKR+18, NPT17, OS05, QHS+20, RL19, SB21, Sea16, SGHM15, SGHM16, SMZ06, WHH08, AAF12, AH11, CCN+12, FG14, Kau11, LCC11b, NCH11, NRKR13, Oli10, PYR+12, SYOL05, SYOL07, SIS+11, TRF05]. Climate [HFVH17, BEF15, CK14, Pet13].


Coeducational [DH18, SCB16]. Cogenerative [Hsu19].

Cognition [CC05, LCA16]. Cognitive [AK20, FTWC18, HHS+21, HMM22, LL14, Miy08, NHLs08, RXLC16, RV17, SLCK19, ST05, TT18, YT18, Bab10, BHM014, CA14, CCWL15, Las13, LY13, SP15, TSP12].


[AN18, ÇAC07, CC05, Che08, CABR06, DC06, HZL22, HCBZ03, HFS16, KD09, LSW19, NPT17, QVST17, SB17, SCSK19, Su08, TLK17, Xu22, ZBG21, AAMU+14, BSA+14, BPG11, BRMN15, BS15, ÇAC09, CBT+12, DMNH11, ETG16, GGSP10, KYA13a, KIR12, KKvdW15, LT11, MNE12, ME13, NY11, ÔDC09, Top13, WP12].
Concepts [AT07, CB16, CC05, EG17, MSA17, YLTO21, Arc12, AAY15, ÇAC09, CSM12, DC08, HBP17, JW15, KYA13a, KTBG15, KN13, LCC11b, PC13, RCT+11, STC12, Tan11, TCC+10, VRW05, WMS13, WCY16].

Conceptual [ASR19, BPG11, ÇAC07, CB16, EG17, FB19, HA07, Hua17, JLC17, KÇ18, MZC+19, MC04, MQ07, NACE22, SV08, SMPK+19, SP17, SLC17, SF05, TT07, TS04, WT18, APCK12, BHSC10, CAC09, CSM12, DC08, HBP17, JW15, KYA13a, KTBG15, KN13, LCC11b, PC13, RCT+11, STC12, Tan11, TCC+10, VRW05, WMS13, WCY16].


Concrete [ZYJ22]. Concrete-Representational-Abstract [ZYJ22].


Connect [DNV17]. Connected [AVM16, QHS+20, SIS+11]. Connecting [IK18, LJO8, OL8, mS13, YKJ20]. Connection [GZ21, TCH+17].


Construct [KK22b, Wil20a, AC15]. Constructing [EK19, EP21, Hua06, Kid11, SP17, HL07, WLSC09]. Construction [CA21, EHM19, GAMDV22, KÇ18, LR08, NOVRR22, PSM+20, YL18, CEB12, PPS12]. Constructions [CW06]. constructivism [TDBLY16].

Constructivist [DS18, MC04, SA22, Zei15, EDMA15, Sah10].

Consumption [JHWW16]. Contemporary [Lin05b, HEB11]. Content [AP+17, CCW16, DK18, DRZ20, DJB15, EGN11, HYC+16, KR18b, Kul18, LTM18, LTCY07, MS18, RB09, SGHM15, SGHM16, TCH+17, YCH04, CTGS15, ELY15, FG14, Hsi13, ZB13]. content-rich [ZB13].

Content-Specific [DK18, SGHM15, SGHM16]. contents [KN13]. Content [HCH16]. Context [AGBC17, AFG21, CÖ20, CYT16, DNWC18, EGJ09, Fre21, GT19, GFCC18, HNAA16, KKS+19, KA19, Mea07, QVST17, RTM+20, SS19, TKDD19, Vid15, Wil20a, Wil21, ZG08, BEF15, Bes11a, Bes11b, BRMNH15, CSM12, DK10, MDT13, UKM11, VRW05, YFL15].

Contradictions [SB21]. Contrast [VBACCG22].
Contribute [TSA12]. Contributing [CS16]. Contribution [LY07, Ols18].
Contributors [HK21]. control [BES12]. Controversial [YZK15]. converge [CMME15]. Cooperative [AT07, CB16, EG17, KWO07, Ebr12, PCL18].
Coordinates [SVDK09]. Coordinating [CCT16]. Coordination [BL21].
Country [MG15a]. Course [CT17, Cor17, Das05, Gub16, Jao17, Lei22, MDF08, Su08, TYC17, UD18, YWG21, EDS10, EFL+13, Lec16a, LG13].
Courses [BG17, Ble09, MS18, PFPG+18, BL09, Din14]. Covariation [Wil20a]. Covariational [YKUIB17]. Cover [HK19]. Cover-up [HK19].
Crane [KEET17]. Create [EH18]. Creating [Cro09, KTBG15, LY13].
Creation [Koh19, NK04]. Creative [Ch09, Mer07, SL20, SP21a, LLL15].
Creativity [AAAB16, GAMDV22, JRS22, HK10]. credibility [AB11].
Credit [BK+19]. Crisis [DG19]. Critical [DJZ21, PH19, RT10, TH19, TDV+17, TDE18, VTV16, YWF20, Ale14, Lin14b, Lin16b]. Critique [CH20, YY13]. Croatian [KS20]. Cross [CL20, Din18, KYA13b, KL18b, KH15, MLK+15, SWCH20, YYC04, CT14c, EGT16, KYA13c, ME13, TOV12, TCC+10].
Cross-Age [KH15, YYC04, CT14c]. Cross-Cultural [CL20, KL18b, SWCH20, MLK+15]. Cross-Grade [Din18]. cross-level [ME13]. Cross-National [KYA13b, EGT16, KYA13c, TOV12, TCC+10].
Curriculum [BVDV13, CC18, DNWC18, FYL21, HHJR21, Hua17, KC22, KR18a, KYA13b, Leu05, Mel10, SC03, Sah10, SCSK19, Sty08, TVC03, TC07, VB20, WM17, WB20, WM19, Wat17, WO19, ZF06, CTGS15, HBT13, HFWY14, KI13c, Kuw13, OS10, PZLR16, TSA12, Tan11, VRW05, WLS09].

Datasets [ALT\textsuperscript{+}07]. deal [BNH\textsuperscript{+}15].
decimals [LM15]. Decision [BTJA18, FHL19, LLL22, CBO09].
Decision-Making [BTJA18, LLL22, CBO09]. Decisions [LL05, Ols07].
Deduction [HM09, AE10]. Deep [SLC17]. defense [NPR12]. definite
[MMP14]. Definition [Dah17, PMCG\textsuperscript{+}17, Kid11, SG15, WCY16].
Definitions [Dah17, Ulu21]. Defuse [AVT16]. degree [EDS10]. Degrees
[AN18, CA14]. Delivery [AM04, WSA07]. Delphi [WB20]. Delta
[TDBLY16]. Demands [On21, PN18, PB19, SC21, SCS\textsuperscript{+}12, TT18, WL21].
Democracy [KKE\textsuperscript{+}17]. Democratic [DS18]. Demographic
[TLHV16a, TLHV16b, WCY16]. depth [VR12]. Derivative
[Wil20b, AU15, GLSM11, SMFL15]. derivatives [MMR15]. Derived
[BB17, CYT16]. Describing [KP18]. Descriptions [Hsu19]. Descriptive
[PL15, LCC11b]. Design [CRC22, CC18, CO22, DC16, DA20a, DA20b, 
Gub16, GRWHP19, GJ21, KJ19, KEET17, MB20, PP18, SLV22, SOTF13, 
TAC19, YWF20, Aky16, AAY15, Ded11, MAL\textsuperscript{+}11, MSH10]. Design-Based
[CRC22, KEET17, TAC19]. Designed [MDF08, TKY20, CCWL15].
Designing [AK20, CGERBL18, CMP19, ELY15, FCS15, Hal12, KR18b, LLP19, 
OLi10, SMFL15, SP21a, TMS22, VJ06, WP12, WCT\textsuperscript{+}12, AE10, KB17, Lin09].
Development [AM04, AEP22, BMD\textsuperscript{+}15, BVD\textsuperscript{+}15, BCV21, BOO22, BB19, 
CTC16, CC05, ERC03, GGSP10, Gub16, HDR21, HZL22, HCBZ03, 
HpCH\textsuperscript{+}16, HMM22, IAS17, KKS\textsuperscript{+}19, KP18, KH08, KH06, LTT\textsuperscript{+}21, 
LTCCY07, Lin04, LLC\textsuperscript{+}15, LH16, LLC\textsuperscript{+}16, Lin17, Lor05, LTD\textsuperscript{+}18, MB20, 
MAA05, PP19, PDUA21, Per20, Ran06, RAL\textsuperscript{+}07, SC03, SCIB22, SF05, 
TS016, TVC03, TSKIB22, TWD\textsuperscript{+}17, TYC17, VA21, Wan04, WC16, WK09, 
WBM21, WCG09, Ye017a, ZBE21, AU15, BC11, BHO014, Cha10, CCG\textsuperscript{+}11, 
Chii12a, DDG\textsuperscript{+}12, FG14, KBY11, LG13, LCC\textsuperscript{+}09, LYP14, MNE12, 
MAL\textsuperscript{+}11, MPP14, Mor14, QM14, RSPK14, RGV15, Rut11, SOTF13, SYOL05, 
SYOL07, SW12, WHA12, WHA14, ZB13, va06, Ye017b]. Diagnosing
[AK20, CSM12]. Diagnosis [Saf18]. Diagnostic
[HMM22, KS21, Lin04, LL17]. Diagnostic-Remediation [LL17]. Diagram
[HC16b]. Dialectical [Dog21]. Dialectically [BB09]. Dialogic
[WK09]. Didactic [BD21, FG21, KSČ20, MCV17a, OC21, EGP\textsuperscript{+}09].
Differ [SGHM15, SGHM16]. Difference
[HNA16, HSD18, KBK15, LYY07, ZG08, CBDV10, SLES09, WD12, YHT16].
Differences
[BF19, HC16b, LFM\textsuperscript{+}19, MRLM21, AKA18, TPM19, WwLD\textsuperscript{+}15, WICC\textsuperscript{+}18, 
YCH04, BRMN15, CK14, Ing14, LY10, LM12, NSV13, PC13, VAF12, Yan14].
Different [AM04, Ble09, CA21, CP17, CC18, DNV17, EPEG07, ERdDS20,
[LGS18a, LGS18b]. **Education**
[AHO19, Alg20, ALT+07, AM04, Ano12a, Ano12b, ABH17, BC05, Chi04, DBV22, DWM16, EB20, Eng17, FHL19, Fre21, GCCCG18, GC21, GBC21, Gil04, GSJ+17, HC16a, HDvJ21, JRS22, KŠČ20, Kow07, KYA13b, KA19, KBK15, Ky06, LF17, Ler21b, Ler07, Leu22, LTCCY07, LLL19, MJ18, MFG+21, NOVRR22, PZA16, PA22, PH18, QVST17, RL19, RAL+07, SC03, SBR22, SBS+07, SLK20, SS18, SS21, SBN16, SWAEKS19, TWC+16, TSIB22, TYW+17, TM17, Tsa06, VRFC17, VTV16, Wan20, WKG20, ZSW+21, ZX20, ZP06, ZBE21, AV06, BMN16, BS15, BK13b, CR13, CBO09, CB+12, DFR06, Ded11, HEB11, HpCH+16, Kaz14, KGA+11, KYA13c, Kni10, Kôn13, KKVdW15, KB14, Las13, Lee16a, LHL+12, LH15, LC14a, LC14b, Lui13, MR14, NFK10, NFB+15, NDD14, OEMZ12.]
education [RR11, RR09, Sch15, SBN14, TOV12, TDBLY16, Tip10, YL08, ZKS+05, HL07, SYOL07, VT07a]. **Educational** [KK22b, LF17, Law05, SLZ+18, TKY20, Zo20, Ko10, LLL15, MP10, NFK10, SBR14]. **Educator** [KEB21, LdCCK21, RBE21, Sum20, TPS21, VA21, WHC17, AE10]. **Educators** [HDR21, SP21b, WBM21, Ama16, ZKS+05]. **Effect** [AT07, AOZ09, CA21, CHC16, CT04, DMNH11, GG09, HHT+20, MB07, MHS16, Jia21, Jia19, LLWS13, PDUA21, RVT20, Sch14, TH18, YT20, AT15, BZST10, Ebr12, LM10, Oh11, PDG15, SWA+12, WLS14]. **Effective** [CO22, FHu18, KFM+17, RAL+07, TLK17, TDE18, CBO09, O012]. **Effectiveness** [AAF12, GC21, TAC19, WT18, WSA07, YS19b, Bra12, CAC09, CS15, KYA13a, MP10, PZLR16, WWTC10]. **Effects** [BB17, BC022, DJB15, FTWC18, GN08, KWO07, KKL20, KEET17, Las13, LW18, Leu06, NOVRR22, Ng10, PL15, RV17, SEW18, SLK20, SAPM22, Su08, UE19, YZK15, Yam18, YT07, ZYJ22, Bji10, BMH04, CA14, CTGS15, CCW13, MV16, OD09, YHT16, BK13a]. **Efficacy** [AO16, DC06, Gao20, HZL22, HL07, HHT+20, MB07, TL021, LLIW+20, LJC08, LTD+18, MS18, MA21, RB09, TL21, TH18, VB20, WT20, YZK15, YLTO21, Bag11, Bru10, Cha10, CK14, JLC08, KIR12, Lai22, LM12, Pet13, RCT+11, Uit14, VHM22]. **Egyptian** [SOTF13]. **eight** [Kau11]. **eighteenth** [Pap10]. **Eighth** [CCN+12, DA20a, DA20b, IA08, LM21, AR10, JLC+13, Lee11, Mor14]. **Eighth-Grade** [IA08]. **Elder** [PTW05]. **Electric** [CK06, Lin16a, KTBG15, SY14]. **Electrical** [CA21, TAC19]. **Electricity** [AO09, ABG06, KH15, TDW+17, Gok12]. **Electrochemistry** [AT07, OL14]. **electrolysis** [STC12]. **electromagnetic** [AC15]. **electromagnetics** [Lep12]. **Elementary** [APR+17, AM04, ABG06, BI15, TDW+17, Gok12]. **Elementary-Aged** [RMR22].
Elementary-Level [HMC19]. Elements [AFG21, FMOMG16]. Eleventh [SP05, TLR21, vV16]. Eleventh-Grade [TLR21, vV16]. Eleventh-Graders [SP05, TLR21, vV16].

Eliciting [Ana20, KB21, UD18, DS15]. Else [VWH17]. Elucidating [LDG20]. Elusive [LF18]. Embedded [DP07, LsL14].


Emotion [Dog12]. Empathy [Ron20]. Empathic [LAN20, MSAGHMNG19, Sum20, HY05]. Empathy [Ron20]. Empathy [HHJR21]. Empirical [Ber19, DNV17, EB20, NPT17, PB19, PPCC20, BK13b, HYC16, LHL12, NFB15, RT10, WCY16]. Empirically [BB17, JYC21].


Engaging [DC16, DBV22, HII18, HS14, LCA16, NN11, QHS17, WSW18, CJOC11]. Engineering [CRC22, CCCN17, CC18, DC16, EK18, FYL21, GS16, GRWHP19, HP09, IAS17, KAK18, LW16, MB20, PPB18, PFFG18, YWF20, ZSW18, AC15, HCC15]. Engineering-Focused [FYL21]. Engineers [vdWBD17]. England [EKC21, SBN14, SBN16, TS20, WBB17].

English [Ale14, AM14a, DBS15, DKL16, GHS18, HILAT16, MR14, PSM18, 20, Sch14, SCDC21, SS19]. Enhance [BAN21, CMP19, Hua17, PP08, PSM18, 20, Cro09]. Enhanced [ALT14, OH11, ODC09]. Encouragement [HCC15].

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Eye-tracking [ALA+15].

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Facilitate [Jia19].

Facilitates [PP19].

Facilitating [CRC22, Che08, Dud17, LLT+20, NAÇE22].

Facilitator [RAL+07].

Facility [MOI07].

Factors [AK13, AE16, CS16, FH13, Givi09, HGSL18, JCC20, PCL18, SE18, SWDR20, WHH08, ZBB22, GGD15b, HCC15, Hob13, LS14, MR14, SKA11].

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green [KIR12]. Greenhouse [Jaf20]. Ground [RBE21, And14]. Grounded [JYC21]. Group [ABPV20, EN08, EGJ09, EKC+21, FHmL18, HK21, KFM+17, OS05, MMZ09, VAF12]. Groups [Bil06, SWAEKS19, PK15].


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Home [DF22, Fun21, SMPK+19]. Holism [Lui13]. Holistic [AKD+19].

Immigrant [Are12, AK13]. Impact [AVT16, EB20, HL04, Kul18, LAN20, LHC17, Lin17, LTD+18, MRJ+21, MMR15, OL14, Saw19, SCSK19, AKA18, SW14, TH19, TKDD19, Yük14, EGP+09, Gok12, HCC15, Mor14, NFK10, OBFI5, SKA11, SG15, ZC15].

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Incommensurability [Kaw07]. Inconsistencies [ZGZM17]. Incorrect
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Indigenous [KYA13b, KYA13c, ATG13, GS13, MDT13, Web13]. Individual
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inequality [Kni10]. inference [CMME15]. Infinite [Bar17]. Infinitesimal
[Par07]. Inference [Jon19]. influence [CCW16, CYT16, Das05, DJE17, HLT18, KRV+22, KVB22, LCA16, LF17, Su08]. Information
[DFR06, KVB22, LCA16, LF17, Su08]. Informed [MVC17a, MVC17b].
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[HIS+16, HISH16]. Inhibition [MHC19]. inhibitory [BES12]. Initial
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HDvJ21, IAS17, KD09, Kho09, Koh19, KTC19, LLC+16, LTD+18, MHR19,
MSA17, PH19, Pet22, QVST17, SLV22, TPS21, TYS17, TKS18, WL08,
Wan20, WSW+08, Zio08, AMBLL16, BRMNH15, CCG+11, CS15, CKH15,
DMNH11, ES16, FD12, HTWT14, KLJ+13, KBG15, LYP14, MS10,
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Inquiry-Based [AOZ09, AMG16, Dud17, HDvJ21, KTC19, MSA17,
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[KBK+22]. Instructors [PZA16]. Instrument [AMFC21, HZL22, TKS18,
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K-12 [VHM22].
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Knowledge-Based [Shi21]. Knowledge-Integration [Saf18].
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Lab [TSMW16]. laboratories [BJ10]. Laboratory [CT17, CHC16, Che08, KD09, KAK22, KH08, LLW+20, TYW+17, BRMN15, DMNH11, KIR12, Mas15, MIJ15, ODC09]. laboratory-based [KIR12].
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Learner [CRC22, Eme09, GB22, OÇ08, PSM+20, SP05, TT07, AB13, FL11].
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Ale14, BL09, WD12]. Learning [AT07, AYLW16, ALT14, AM04, AK17b, ABG06, BAN21, BNN16, BVC21, BTJA18, CGERBL18, CTC16, CB16, CP17, CCCN17, CH16, CWLH19, CCWL15, CC18, CMP19, CABR06, Cor18, CT04, Dhi08, DL12, DJZ21, DLD18, DJB15, EN08, EG17, FCS15, FT05, FB06, FHM11, GGD15a, GSO+17, GHP07, GRWHP19, GJ21, HA07, HNMG16, HE17, Hew04, HLT22, HMS16, HDvJ12, IAS17, IFL08, JSH+19, KLa18, KL18a, KKS+19, KRV+22, KP18, KA19, jK19, KVB22, KEE17, KTC19, LE06, Lau22, LL06, LB08, LLW+20, LKC+15, LZL+18, LM10, LiCCK21, MRJ+21, MNBZH+21, MSA17, MDF08, MZC+19, MVC17b, MBR08, MFG+21, NA+CE22, NLW16, NF20, Own06, Own10, PSO17, PP08, PH18, QHS+20, RGC08, Ro119, RTM+20, Saf18, SBM12, SD22, Shi18, SLCK19, SY22, So03, SZCL18, SML20, SLZ+18, SGHM15, SGHM16, Su08, SMZ06].

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Summary of studies in mathematics and related fields:

- Mathematics
- Mathematics-Related
- Mathematics/Science
- Matters
- Mathematization
- Mathematics/Related
- Measurement

For detailed information, please refer to the original document.
Miy08, PH18, SA16, YHL18, CRR09, GS13, TSA12, WLJ14.
HBP17, HHT+20, KWO07, KTC19, NLW16, hCN18, Ng20, Oro16, PP15, AKA18, ZL11, rSY19, CWW11, DRT+12, MDT13, OL14, VAF12.


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**Performances** [SL21]. **Period** [SP21a]. **Periodic** [FMOMG16]. **Periodicity**

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[VRFCT+08]. **Phenomena** [KNF+20, LH08, PTW05, AB11, OH14].

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cww11, EFL+13, EGN11, GS12, Gok12, KN13, KkvD15, Maj14, MR14,

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[AYLW16]. **physiology** [MIJJ15]. **Piagetian**

[Bab10, NDD14]. **Pictorial** [HP21]. **Picture** [AKD+19, LCC11b]. **Pipeline**

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Programmes [ALT+07, Len06, Ng10, Wil21, PZLR16, TDBLY16]. Programmes
[Vid15].
Programming [KAK+20]. Programs [Lin17, BK13b, CGR13, SBR14].
Programming [KAK+20]. Programs [Lin17, BK13b, CGR13, SBR14].
Progress [And14, KLJ+13]. Progression [AWL16, BTJA18, CGERBL18, DH18, Din18, JSH+19, Lee18, DAO+11, DCFC16, HpCH+16]. progressions
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[FT05, HNB11, MNE12]. Promoting [BE16, BB09, Bil06, BL21, CTT+11, CB09, KKL20, MSS22, NPR12, SAPM22, AH11]. Proof
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Prosociality [HHT+20, PCL18]. Prospective [ANLL1, BG22, Ekb19, GCCCG18, KGA+11, MDF08, MBBR08, Ng20, SAA18, SP21b, TSKIB22, Ul21, Yam18, YKUIB17, ZZ16, KAC15, ME13, RRW11]. Provide
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[jK19]. Providers [ERC03]. Province [Dud17, Bag11]. Proving
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Pursuit [AVM16]. Putting
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[GY19]. Pythagorean
[ZZ16].
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[BTY11]. Quantitative [OC08]. Quantitatively
[SR21]. Quantities
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Science
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Selected [ES04, ES09, WBB17, ZF06, BAV+11]. Selection [LL21a, LDG20, SWDR20, BHSC10]. Selective [Shi21]. Self [AYLW16, AO16, CC16, CT04, DC06, EP21, FCS15, Gao20, HZL22, HLT22, HBP17, HHT21, Lau22, LLW+20, LZL+18, LJCO8, MRLM21, MA18, MA21, NOVRR22, NHL08, Pso17, Saf18, SC16, TL21, TAC19, TLR21, TH18, VHM22, WT20, YWC+18, YS19b, YT07, ZBB22, Arc12, Bag11, Bur10, CK14, Chi12a, Hyc+16, Jlc08, LM12, Pet13, Tig14, Ut14, VAF12].


Self-Regulation [LLZ+18, PSO17, TAC19, TLR21, CC16, YS19b, VAf12]. 


Serbia [MB21]. SERI [KKS+19]. series [Rut11]. Service [ANLL21, Bay09, CPTMSM22, CT04, CBR21, ELO08, Gub16, Jao17, KR18b, LTM18, SBR22, VA21, WSW+08, XC21, YZK15, YRR09, A16, ABPD16, AO16, B106, Bla04, Cas07, CA14, CY21, DS15, DK15, DB17, EK+21, GC19, GGD15b, HM09, IF20, Jao20, KIr12, Kill8, KLJ+13, KB17, KN13, Lau22, LHC17, LL21a, LL21b, Lin05b, NN11, Oh14, PSB19, Pet22, PA22, Ron20, SMFL15, Tay18, VBACCG22, Wan20]. SES [CCN+12].

[Wil20b]. Special
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T [VT07a]. Tables [Sha06]. Tacit [FB06]. Tacit-explicit [FB06]. Tagging [OC21]. Taiwan [CLY10, CCN+12, GBC21, HL13, JLC08, Kya13b, HY05, JLC12, JLC+13, LY10, Lee18, LW16, Lin05, WL18, WT20, Yan14, YCL04].

Taiwanese [AMBLL16, CT18, Chi12b, Cho21, Hsi13, HWW13, HpCH+16, HY05, JLC12, JLC+13, LY10, Lee18, LW16, Lin05, WL18, WT20, Yan14, YCL04]. Taking [EA19], Tal [TT22]. talented [LG13]. Talk [JL20, LL+15, LL+16, MoG03, El 21, THAD20, TA15, KHL12]. Talk-Moves [THAD20]. Talking [EGJ09, CC14, Kot10]. Task [ANLL21, GD19, JSS17, KJ19, LL18a, PL19b, SCDC21]. Tasks [AWL16, BRSG20, BB19, BG22, CJ17, Dah17, Hew04, KR+22, LLP19, Lem21, MMA05, PSB19, PN18, Ron18, RH19, SL20, Tay18, TT18, Yeo17a,
Yeo17b, ZG08, Bab10, Bay13, Bes11a, Bes11b, EVV11, LM15, SY14. tasks* [Lin06]. taught [DCFC16, EE11, MMZ09]. Taxonomy [WO19]. Teach [AO16, SY22, WM19, IK14]. Teacher [AVM16, APR+17, AHO19, AMG16, Ama20, AAF17, Ari18, Ari19, AK20, AOJT22, ANL121, AO16, Bal18, BE16, Bla04, BKC15, BHD+15, BCV21, BL21, BWO20, CW06, ÇAC07, CPTMSM22, CCW16, CRC22, CO18, CY21, Chi04, CHG17, CTGTQ21, CGO22, CG22, Cor18, Cor17, CT04, CBR21, DHB19, DB17, DNWC18, DJB15, EP21, EK18, ES08, FI19, GCCCG18, GC19, GC21, GB22, Gov17, HSMO06, HHJR21, HJCR21, HAA16, HZL22, HC16a, HGVH17, HKS18, HSH22, HCBS18a, HCBS18b, IAS17, IK18, IFL20, JLO18, Jaf20, Jao17, JSRP20, JLL20, KBE21, KLJ+13, KA19, jKMH20, KS21, KLF15, KGB21, LNP+18, LAN20, LR20, Lan22, LSW19, LLP03, LL05, LLP19, LL20, Lee21a, LL21a, LL21b, LTM18, Leu22, LTCCY07, LSK18]. Teacher [LW16, LJCL08, LdCCK21, LTD+18, LDG20, LKI8b, MHSI09, MSAGHMNG19, MSGGVM20, MOdBB12, McG03, MW05, MBBR08, MA21, MB20, MKSK16, MMA05, MGF+21, MOI07, NKR+17, Nyi15, OÇ08, PSE17, PL19a, PUR18, PL19b, PN04, Per22, PA22, RAL+07, RBE21, Rot20, RH15, RH19, SCG+19, SR21, SBR22, SMG+19, SCB22, Sea16, SC21, SE22, SAA18, Sh12, SL21, SJ12, SMZ06, Sum16a, Sum16b, SP12, THAD20, TBP17, Tay18, TC07, TCH+17, TSKIB22, TKDD19, TPS21, TA15, UH21, VH12, VA21, WM17, WJ07, Wan20, WCC19, WBM21, WKG20, WWHO, WHC17, WICC+18, XC21, YZK15, Yam18, YKB21, YKUBL17, YSI9b, YWG21, ZZ16, ZSW+21, ZV18, rSY19, AV06, AH11, AAMU+14, AAS13, Ama16, AW12, Bag11, BB09, BW10, BDS13, BK13b, Bur10, ÇTC14, CRR13]. teacher [Cha10, CVCV11, CCM+12, CBO09, DS15, D315, DW15, EE11, ELY15, EDM15, Em09, GLY09, HBT13, HT13, Hobi13, HK10, JLC08, Jac12, KHL12, KGA+11, KB17, Ko10, Kön13, KN13, KE16, KB14, Las13, Lee16a, LG13, Li11, LCC+09, Lin06, LCC11a, Lin14a, MNE12, ME13, MIJ15, MG15a, MG15b, Mor14, NY11, NN11, OBF15, Oli10, Obs07, OEMZ12, QM14, RRW11, RL12, RCC+11, SMFL15, Šap13, SC14, TBT+10, TDBLY16, Top13, VCT13, WAI14, WMS13, YAM14, ZKS+05, ZC15, ZB13, NZKR+18]. Teacher-Directed [SJL20]. teacher-generated [NY11]. teacher-researchers [KB14]. Teachers [AAAB16, Aa16, ABPD16, AD16, AM04, Bay09, BB19, BG22, ÇP17, Che08, Dog16, DKL16, EKC+21, EHL18, ERC03, ELO08, GPC15, Gu16, HTCS19, HKSL22, HM09, HCBS03, HL04, KR18b, Kot16, KEB21, LHC17, LTT+19, Leu22, Lin5b, Lin16a, Lin17, LKI20, MDF08, MSAGHM22, MS18, OE19, PP08, PSB19, PDUA21, RJ21, Ron20, SC03, SV22, SY22, Sty08, SP12, TYC17, VA21, VBA22, WSA07, WS+08, WICC+18, XCS21, YM22, YRR09, YKKB19, BW10, BK13a, BAY+11, CA14, CK15, CMME15, DFR06, Ded11, DK15, ELY15, GGD15b, HWW13, KST09, KIR12, KBY11, KAC15, LCC11a, Maj14, MSK22, OS10, Oh14, RRW11, WT13, ZKS+05].
Teaching [AOZ09, APR+17, AAAB16, AMFC21, AAF17, AK17b, BLS20, BdSSC16, BAN21, Bla04, BL21, CW06, CRC22, CO18, CCCN17, CP12, Chi09, CMP19, CT04, Dud17, EH18, Fun21, Gal22, GGD15a, HNMGA16, HHJR21, HNAA16, HE17, HM09, HFVH17, Hob13, HMS16, Jao17, JLC17, KWO07, KB16a, KLH15, KBK15, Lan22, LL05, Len22, LP11, Lin05b, LW16, LL17, LJC08, LTD+18, MSS22, MVC17b, McGo3, MBBR08, MS18, MA21, NOVRR22, PL19a, PYR+12, Ran06, RH15, SS18, SMPK+19, SG09, SD22, SY22, SLES09, SLZ+18, SP21b, TSMW16, TKDD19, VCSW20, VBACCG22, WL08, WCC19, WICC+18, XC21, YZK15, Yan03, ZBB22, ZBE21, ATG13, AV06, AAMU+14, AAS13, BPG11, BEF15, BK13a, BMN16, Bur10, CBO09, Ded15, DW15, EGN11, EK09, FD12, HBTP13, Hal12, HK10, HWW13, JLC08, JLU+10]. teaching [KG15, KLJ+13, KN13, MW09, Maj14, ME13, MS14, NEAC10, QM14, Sap13, TRF05].

Teams [GJ21]. technical [Por20]. technique [KYA13a]. techniques [LH15, Pap10].

Techno [JC17, vdWBD17]. Techno-Mathematical [JC17, vdWBD17].

Technological [Koh19, SHM21, YJY08, Aky16, DS15, GCK15].

Technologies [GGD15a, RGC08, Su08, ZZ09]. Technology [ALT14, BC05, CP17, CCCN17, CT04, DFR06, DA20a, DA20b, EB20, HCH16, JC17, LW16, Ng19, SC03, Wai14, WHH08, WCG09, HCC15, HIS+16, HISH16, KAC15, RSPK14, SST+11, VB20]. Technology-Aided [CP17].


tells [Kni10].

Temperature [BF19, YLTO21]. Ten [KP18].
tendency [Bab10]. Tensions [HT13, LR20]. Term [BHWM20, CTC16, TOV12]. Terms [MSdSGG17, SF05].

Tertiary [BCC06, Fre21, JLS41, DG19, AAF12, AOC10, RT10].

Tertiary-level [AAE12].

Test [AK20, BE17, GG09, KS21, LL06, Lin04, LLC+16, SP05, TDV+17, YS21, YCH04, AU15, DLI2, OEMZ12, WCT+12].

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